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Medicine as a Business

DESPITE the aureous glory that emanates from the head of the statue, he has feet of clay. Though we take the loftiest view of the professional character of the physician and his work, the most altruistic conception of his relationship to the public, there remains, nevertheless, the stern fact that the doctor must eat, must be clothed, sheltered, all the other necessities of life must be his. All these things cost money; and no consideration of the doctor's beneficent life will induce the butcher, the baker, the candlestick maker, to supply him these necessities without due recompense. Which leads us to remark that the radical difficulty lies in the customary method of remunerating the doctor for his services.

In his hours of ease and health, the citizen has no use or thought for the doctor; but when affliction wrings his brow or ties his little insides up into hard knots, this self-same citizen very promptly resorts to the man of medicine.

Unfortunately, this is the very period when by reason of his illness the help-seeking man's own income stops, while his outlays are vastly increased. It follows that, for the average citizen, the physician's services are only required at the time when said citizen is in a period of financial stress, which may be a long time indeed. Conse-

quently, by reason of his humanitarian position in the community, the doctor must perforce wait for his payment until the patient is well, his other bills are paid, and a surplus has accrued which will enable him to defray this intercurrent and hence as a rule unprovided-for expense.

No wonder the doctor is poor. He could not be otherwise with such an outgrown, preposterous financial method. Besides, this system of remuneration is the principal difficulty in the way of establishing such a relation between the physician and his *clientèle* as would vastly facilitate his work, his income and his patient's health.

We have in the United States of America about one physician to every six hundred inhabitants. This is an enormously larger proportion of medical advisers than any other country in the world possesses, and at first sight leads to the suggestion that the profession here is frightfully overcrowded. Nothing, however, is further from the truth, and the fact that this opinion is universally accepted is an evidence of the shallow thought which is usually given to such propositions.

The truth is that the American citizen requires vastly more medical attendance than the people of any other country on earth. The American, on the average, is more intelligent and takes more forethought

than any other. I am speaking here of the average, and not of a small, highly cultivated upper class; for we must not forget that America has no peasantry, except it may be the bulk of the negroes of the south. The average American citizen believes in attacking disease early, before it has established a foothold; hence he does not wait until the case looks desperate, or until domestic treatment has failed, before calling in the advice of an expert.

It is impossible to determine what proportion of unauthorized practitioners should be added to the number of the regularly registered physicians of this country, but it is safe to assume that there are not less than 50,000, and that out of the 600 population falling to each physician, at least 200 are attended by other than duly, legally and scientifically qualified physicians. It is my firm belief that the reason for this is that the average physician cannot possibly do justice to a practice of six hundred persons.

We will suppose our doctors undertake the care of this number of persons. It must be remembered that in the enumeration all classes of practitioners are embraced; consequently, our doctor must do, not only the medical work, but the surgical, obstetric, gynecologic, pediatric, rectal, eye, ear, nose, throat, skin, and all other forms of practice.

Suppose he sees each of his patients twice a month. Taking twenty-five working days (for the doctor has a soul to save and needs his Sunday rest and worship as much as anybody else), he must see forty-eight persons a day. Let him devote fifteen minutes to each person, and he has consumed twelve hours out of the twenty-four in this work! Add to this the attention to those who are ill at the time, the accident cases, the average number of confinements, his laboratory work, study, and the time required to keep informed on the progress of his profession—is it possible a man can do this without an assistant?

That this is not done is the cause of incalculable ills, for according to our present system the physician is not called in until the patient is actually ill. How many times we are constrained to say that, had we been called earlier in the course of the disease, it might have been broken up.

Preventive medicine is the watchword of the day. It is our duty to detect the tendencies to disease, and so advise our patients that their health and working capacity will not be impaired by the development of maladies which we alone are capable of detecting in their incipency, or of foreseeing before they have actually begun, from our study of the patient's conditions, environment and habits.

The difficulty that lies in the way of this matter is the miserable, crude method of charging for each visit. If our work were so arranged that each of our six hundred patients paid us ten dollars a year, we should have an income far in excess of that of the ordinary physician, yet at an expense which is easily within the reach of every patient, of every individual; especially as by it sickness would be largely prevented, and would not, if it came, throw upon the patient another burden through the attendance of the physician.

I quite expect that somebody will raise against me the appropriate charge of "favoring contract practice." This, however, is simply an instance of the innate conservatism of the profession. We are not accustomed to doing business in this way, hence we do not do it. We have been accustomed to the old way, and that seems right.

The leaders of the profession, who are drawing from \$50,000 to \$100,000 annually from their work, see no necessity for the change; but if such a plan could be instituted it is evident that nearly if not all the difficulties of the profession would vanish. The physician would have such a firm hold upon his patient that he need fear no interlopers. His fences would always be kept up, for many a time a patient drifts off into Christian science or other hallucination, because his physician is too busy to run in for a social call which would keep up the friendship between them.

So long as we are to have paternal government, and the old, American, go-as-you-please and do-as-you-please, do-right-because-it-is-right and not because a policeman is at your elbow, is rapidly becoming a thing of the past, we might as well go the whole length and do the matter right while we are about it.

The inhabitants of each community should be equally divided among the physicians, and these should have no incentive for poaching on their neighbors' preserves. If no increase in pay resulted from such acts, they would soon cease. If there were no extra fees for surgery, it is possible that operating would become somewhat less common. The profession would be more nearly approximated to the ideal of a fraternity; and while a few colossal incomes might be diminished, every member of the profession would have enough.

I shall arrive! what time, what circuit first,
I ask not: but unless God send his hail
Or blinding fireballs, sleet or stifling snow,
In some time, his good time, I shall arrive.
He guides me and the bird. In his good time!
—Browning, in "Paracelsus."

QUANTITATIVE FOOD PRESCRIBING

H. D'Arcy Power of San Francisco reprints, from *The California State Journal*, his interesting article on "Quantitative Food Prescribing." He says, very justly, that we condemn the shotgun prescription and condone the shotgun diet. Probably not one percent of physicians prescribe the quantity of food their patients should take.

Nevertheless the work of the past twenty years has given us such definite information as to food values that we are quite as well prepared to prescribe foods quantitatively as we are to prescribe drugs. The object of food is the preservation of the normal body-heat, and if no food is taken, the heat is sustained by the oxidation of the tissues.

"For years we have fed our typhoid-fever patients on an empiric diet of milk, 40 ounces, beef tea, 40 ounces—less than 1000 calories—when the body was losing at least 2000. That a fat person who has calories to spare should be placed on the same diet as the thin one who has none, is absurd, and degenerative lesions are necessitated in the case of the latter."

"Chittenden has shown that an obese man can be fed on a diet equal to two-thirds of his daily loss without any harm."

"The loss of body-weight equal to the 1500 calories *per diem* can not be replaced by an equal food allowance. Losses occur in the intermolecular combination which demand a larger intake. The question is, How much? Two methods are available: the observation of the general experience of men, and experimentation admitting of exact measurement of the minimum food supply."

The estimates of necessary food supplies varied from 2800 to 3400 calories in twenty-four hours, until Chittenden began his remarkable experiments. He reduced the proteids to 118 Grams, and the total food to a calorie-value of 28 per kilo, or 1600 calories a day; and, yet, after a short period of adjustment lost neither weight nor strength. He found this applied to men in all walks of life, of every age and occupation, and up to the present his conclusions have not been refuted.

Dr. Power does not agree with the idea that natural food cravings must inevitably be right.

A popular method is to calculate the required calories on the basis of the weight, the accepted formula being 16 calories to the pound. But if the patient is far above or below the normal weight, this does not apply: it is too much for the fat man, too little for the lean.

Dr. Power's rule is this: Allow 2000 calories for five feet of height, and add 100 calories for each inch in excess. This closely approximates Rubner's tables. If the patient is bedridden, 25 percent should be deducted from that amount; if at severe labor, 25 percent is added.

The application of this rule to actual conditions, however, is difficult. While we may calculate the fat, proteid, etc., present in any special food, and if we have plenty of time and some knowledge of chemistry and cookery, we can calculate what will be present when ready for consumption, and in this way we may fairly approximate. The directions must be given in terms the patients or their attendants readily understand.

Dr. Power has calculated the following table, giving the weights and values of ordinary food portions.

COOKED FOODS	CALORIE VALUE		
	Per oz.	Per average meal	Portion
Olive oil	200	$\frac{1}{2}$ oz.	100
Butter	200	$\frac{3}{4}$ "	150
Bacon }	150	1 "	150
Ham }			
Sugar	120	1 "	120
Crackers	110	2 "	220
Cake	110	2 "	220
Cheese	110	1 "	120
Meats	90	4 "	360
Toast	90	2 "	180
Dates or figs	90	1 "	90
Bread	80	2 "	160
Eggs	80	2 "	160
Stewed dried fruit	80	2 "	160
Sardines	80	2 "	160
Pies and puddings	50	4 "	200
Poultry and game	50	4 "	200
Cream	50	2 "	100
Potatoes	30	1 large	120
Beans	30	2 oz.	60
Rice	30	4 "	120
Green peas	30	4 "	120
Hominy, macaroni, noodles	30	4 "	120
White fish and shell-fish	25	4 "	100
Milk	20	10 "	200

Note the average ounce value is 80 cubic centimeters.

Note the average portion value is 160 cubic centimeters.

Plain soups, green vegetables, and fresh fruits have flavoring and chemical properties, but so little nutritive value that their presence in a dietary need not be considered.

With such a list we can easily order a dietary to suit the case.

Taking the patient's height, we put on 2000 calories for five feet, and as many hundreds as there are inches in excess; then divide the number by 160, and we have the number of meal portions to be taken each day. These should be distributed as the judgment of the physician may suggest.

Another method of finding the daily number of meal portions for adults of normal weight is, to divide the weight by 10, the answer being the number of meal portions for one day.

In the discussion, Dr. Power replied to a question on vegetarian diet by saying that the minimum of 1500 calories per day could not be diminished without tissue loss. Many of these crank dietaries make up at one end what they are deficient at another. While green vegetables and raw fruit provide so little nourishment that they may be left out of calculation, the natural-food fanatics really maintain themselves on nuts, whose oil-content gives them an unusually high calorie-value.

In a general way, the appetite demands little of the foods that have a higher calorie value, such as butter and sugar.

This is one of the most practically useful papers which has appeared in the medical journals for years. Of course it is only the preliminary, but it is the most important preliminary; in fact, Dr. Power furnishes a foundation on which we can build with security.

The questions remain as to the appetite of the patient and his capacity of digestion. It is still a serious problem as to how much of the food put in the stomach of a typhoid-fever patient can really be digested, assimilated and absorbed, considering the fact that the intestinal mucosa, whence the supply reaches the thoracic duct, is more or less disabled during the course of this malady.

PROGRESS OF THE ACTIVE-PRINCIPLE IDEA

It is evident that manufacturing chemists are awaking to the importance of the active-principle idea. Throughout the field there is an increasing tendency to leave out the inert portions of remedies, concentrating the really valuable parts into small bulk, facilitating the administration and retention of the doses, and securing prompter and more certain action. In one of our exchanges we note that arrheol is being energetically pushed, as affording the virtues of sandalwood with the advantages above noted.

In a recent edition of *Therapeutic Medicine*, Engel-Bey contributes an exceedingly interesting paper on the treatment of leprosy, especially with antileprol. This agent represents an effort to apply the active-principle idea to chaulmoogra oil. It has long been known that decidedly favorable results have been secured by the administration of that remedy in leprosy, only the difficulty has been to induce the patient's stomach to tolerate the large doses of oil which are necessary, for such a length of time as might be required to effect a cure. Incidentally, this is exactly the position in which the treatment of rheumatism by oil of wintergreen was found, until the chemists secured salicylic acid from this oil and the era of the salicylates commenced.

Antileprol is not the active principle of chaulmoogra oil, but merely a purified preparation of it. The process is thus described: The oil is first saponified and then the selected acids extracted. The resulting acid mixture is freed from its ill-smelling constituents and converted, by esterization, into low alkyl esters. The latter are liberated, in a pure neutral form, by distillation, the result being a clear, slightly odorous but almost tasteless liquid.

Dr. Engel-Bey, after two years' experiment, declares that antileprol possesses all the curative powers of chaulmoogra oil, beside being much better borne by the stomach and more easily administered in doses ascending to the maximum.

A successful man is one who has tried, not cried; who has worked, not dodged; who has shouldered responsibility, not evaded it; who has gotten under the burden, not merely stood off, looking on, giving advice and philosophizing on the situation.—Elbert Hubbard.

REPORTING VENEREAL DISEASES

In *The Utah Medical Journal*, Frederic Clift of Salt Lake City contributes an editorial, in which he asks whether syphilis is a contagious disease; and if it is, then why it should not be reported as well as other contagious maladies?

The law specifies certain contagious or infectious diseases by name, but it does not follow that those which are not specifically named should be omitted. If this were the case, the powers of the boards of health would be so limited as to render them useless. For instance, when bubonic plague invaded the community, it certainly would be the duty of the health-board to combat it and to require the reporting of all cases, even were it not distinctly named in the ordinances.

In California the State Board has notified local Boards that after January 1, of this year, syphilis and gonorrhea shall be reportable diseases like other infectious maladies. Were this to be done generally, there is no question but that a step would be taken toward bringing these diseases threatening our social fabric under legal control and lessening their frequency.

However, this would not be the first effect of such a regulation. That rather

would be the immediate and sudden cessation of applications to medical men on the part of the victims of these diseases. Under those conditions the druggists would reap an even bigger harvest from their treatment than they do at present, and irregulars of every description who either might not legally be bound to report cases, or at all events would fail to do so, would experience an instant increase in their practice from this source.

Undoubtedly, for a time the reporting of such affections would occasion widespread alarm and disaster in social circles, still, it would not be long before that condition would cure itself. Certainly, enormous benefits would result if, in connection with this matter of reports, such measures could be taken as to compel the victims of venereal diseases to resort to legally qualified practitioners.

Every operating gynecologist will tell of what a large share of his work is due to the gonococcus; and in most instances it has been innocently acquired by the victim—the woman. The reason for this is the imperfect and ineffective treatment of the trouble in the man; and since the vast majority of these patients apply, not to the physician, but to the druggist for relief, at his door the lamentable consequences must be laid.

Until such measures can be taken as will compel a resort to legally qualified physicians, the result of putting syphilis and gonorrhea upon the list of reportable contagious diseases will surely be that herein predicted—the disappearance of all such cases from the consulting room of the physician.

TIMELY HINTS ON THE CONSERVATION OF HEALTH AND CHILD-LIFE

Samuel G. Dixon, Commissioner of Health of Pennsylvania, in his pamphlet on "Conservation of Child-Life in Pennsylvania," supplies enough good food for thought to keep the journals in editorials for several years, and a few examples may be quoted. Thus we read:

"What are we doing for the healthful development of our people? To begin with, are we doing anything to prevent the chronic sick from marrying?"

"A friend happened in my office, saying as he stretched out his trembling hand, 'You hit me hard!' I was worried and perplexed until he added: 'I lost my son. He was doing so well at college, I thought he could pull through until vacation, when he was to take a long sea trip, but I kept him at it too long.'"

"Boys, like colts, should be educated to fill the positions in life they are fitted for, both mentally and physically. The horse-breeder who should train a heavy Shire-colt for the race course would not commit a more laughable, or perhaps I should rather say pitiable, error than the educator who endeavors to stock the mind of a boy whose brain is alive to the stirrings of mechanical inventions, with Latin roots."

"If a child who learns easily and is ambitious is found to be losing flesh, vitality and color, the alarm should be at once taken, and that child should be put out to pasture."

One of the circulars sent out by this Board is entitled, "Wipe out Typhoid Fever by Killing the Germs in the Bedpan." I never have understood why Dr. Dixon fails to comprehend the importance of germs in the alimentary canal and the necessity of checking their multiplication.

"A school building may be inspected by any person of average intelligence and education. A child can be inspected only by an educated physician."

"Our children belong only to us," say some parents. 'No,' replies the commonwealth, 'they belong in part to you and in part to the whole people.'"

"By medical inspection defects of vision and hearing, deformities, faulty nutrition, incipient tuberculosis, may be detected in time to save much suffering, great waste, and many lives."

"The medical inspector under no circumstances advises as to the selection of a physician, nor does he communicate with the family of a pupil personally, all reports being made directly from the department."

"No article of food is so essential to the healthy development of a growing child as milk."

In the spring of 1909, out of 15,992 dairies inspected only 3212 proved in thoroughly sanitary condition. In 99 typhoid

fever was reported to be present on the premises, and scarlet-fever in 71.

"A decrease of the typhoid-fever death-rate from 56.6 out of every 100,000 population in 1906, to 23.9 in 1909, is a sufficient evidence of the good results already achieved in this direction."

"By the use of diphtheria antitoxin, the Department has been instrumental in saving 6968 lives, and preventing contagion and immense loss of life in several thousand other cases."

"Starting with the cradle, if not earlier, our aim is to conduct the growing citizens of the State through the perils which environ their earlier years, acting in harmony with the school authorities as the advisor and mentor of their parents in all matters pertaining to their healthful development, until they are ready to assume their places as healthy and vigorous as well as properly educated members of society."

Many similar sensible paragraphs might be cited, but the foregoing must suffice for the present.

Hubbard says, "Cultivate charm of manner." That is good advice for the young doctor. Remember that the finest charm has its roots deeply set in consideration for the comfort and sensibilities of others, in real appreciation and sympathy, and has no limitations in sex, class or station. Be courteous to every human creature.

DISINFECTANT AND ANTISEPTIC VALUE OF IODINE

In *The New York Medical Journal*, Major Woodbury contributes an interesting paper on the application of tincture of iodine as an antiseptic, expressing himself as follows:

"The writer believes that iodine is the long-desired ideal disinfectant and antiseptic. It is cheap, easily obtainable, can be carried in small bulk, is efficient in high dilution, does not damage tissue, even where its vitality is reduced by traumatism or infection. It has invariably been successful as a germicide under all conditions when the drug and the germ have been brought together; and though it has great powers of tissue penetration, the writer has yet to see a case of poisoning, even when it was mopped in full strength on the peritoneum and in the parturient uterus."

Dr. Woodbury uses this agent to disinfect the area of operation, without previous preparation, as well as to sterilize instruments and the surgeon's hands. Instruments, however, should preferably be boiled, inasmuch as iodine tarnishes them and affects the cutting edge.

The author further claims that the tincture of iodine is the most valuable drug the railroad or military surgeon can have. He always takes a quart of it (two pint bottles) when serving with troops in the field. "An open prairie or a nipa-thatched shack will show as good results, provided you have a good surgeon and tincture of iodine, as does the finest marble-lined operating pavilion, served by the most scrupulous followers of Lister."

To Major Woodbury is justly entitled the honor of having been the first to introduce to the profession this valuable application of iodine. However, Major Woodbury's fine therapeutic discrimination is not entirely to be credited to himself, but in part at least to heredity, from his distinguished father, Prof. Frank Woodbury of Philadelphia.

WHAT IS MEANT BY REFLEX?

At a meeting of the Medical Association of the City of Greater New York, held December 19, 1910, Dr. Edward D. Fisher undertook to tell the meaning of "reflex." He did not succeed very well in imparting an intelligible idea of the meaning ascribed to this term. He asserted that all action was reflex unless volitional. We always had, he said, the afferent irritation, the receptive center and the efferent impulse. Pain was not necessarily reflex, but might be "referred." The gastric crises were not properly reflex, for here the reflex was lost. The term "referred" gave a clearer conception of the situation.

The term reflex as usually employed signifies the presence of disease at one point and the presence of symptoms at another. It is generally inferred that the irritation at the point of trouble is carried thence to the nerve-centers, and along one or another nerve path to another point, where local symptoms are manifested. Just why this

should be has never been satisfactorily explained.

When there is degeneration of the roots of nerves, with trophic manifestations at their peripheric distribution areas, that is not at all a manifestation of reflex irritation, for the connection is direct. If vomiting results from the presence of a foreign body in the external auditory meatus, we justly term it reflex. But why does the reflex irritation travel by preference along this route, and why does it not always choose the same route?

The most plausible hypothesis as yet advanced in explanation of such phenomena is that which attributes them to a deficiency of the relative supply of the vital force.

Take the most common source of reflexes, the imperfection of the visual apparatus: From the continued straining of a congenitally imperfect eye, it acquires the power of attracting to itself an undue proportion of the general stock of vital force, to enable it to perform the functions demanded. In the case of the eye, these are vastly greater than would be required of that organ in the state of nature we generally assume as the normal standard of function. It has been estimated that the civilized eye is called upon for about 2000 times more service than the eye of the savage. No eye is mathematically perfect; and the strain is multiplied by this excessive demand for accommodation, so that any defect of this part is enormously increased as to its effect in withdrawing to itself the vital force, and engendering reflex irritations at other points. Where these may be depends on that other factor, the relative capacity to retain the share of force.

There is in every human being a point of least resistance, and this point is most easily robbed of its share of force and displays the deficiency in local irritation. Hence the same imperfection of ocular accommodation may display itself in quite a variety of ways in different individuals, each manifesting local symptoms at what happens to be his especial *locus resistentiæ minoris*.

Whether this explanation is substantially a correct view of the pathologic conditions, or is to be considered a mere schematic representation, it affords an excellent working

hypothesis for the basing of our therapeutics. It enlightens us on the dangers of taking the mere symptoms as our guide, without physical examination and the aid of the laboratory; since symptoms apparently identical may proceed from widely different maladies.

This presentation develops in the physician the habit of going to the root of things and ascertaining the true cause of the indisposition he is called to treat—a habit not so general as it should be, by any means. Sometimes it aids directly in the application of therapeutic measures, since we may transmit back along the reflex nerve paths the effect of medicinal remedies. It brings the general practitioner in closer touch with the specialist, and corrects the latter's partial and fragmentary view of the situation, while allowing him full credit for what he really finds ailing in his special part of the anatomy.

Take this view of reflex irritation, together with the influence of fecal toxemia and the measurement of the capabilities of the various eliminative apparatus, and we can see how the physician who employs them as the fundamental principles of his practical work possesses advantages whose value can scarcely be overestimated. He works from the inside of a circle instead of from the outside, for he bases his management of any case on a demand for sound physiology, and from that point the rest is easy enough. Add to these the effects of a correct hygiene and a carefully regulated nutrition, and the influence of such drugs as he perceives to be indicated is enhanced beyond the possibilities of any remedies directed without these fundamentals being first considered.

If the whole of history is in one man, it is all to be explained from individual experience.—Emerson.

THE CANADIAN RECIPROCITY TREATY AND THE PAPER TRADE

Mr. John Norris states that more than six million dollars is the burden imposed by the existing tariff as applied to the Canadian provinces, and he claims that the paper makers are systematically starving the market, the entire stock of paper on hand at the beginning of this year being less than an eight-day supply to the newspapers of the country, while in December, 1910, they ex-

ported more print paper than Canada shipped to us. The larger paper companies reduced their production to thirty-five percent of their normal output.

Meanwhile the wrapping-paper pool advanced prices to the extent of five million dollars per annum, pleaded guilty in the United States Court, and paid a fine. The box pool also pleaded guilty and paid a fine. The West Virginia Pulp and Paper Company is increasing its capital stock to twenty million dollars, and other book-paper mills are expected to follow.

Mr. Norris' statements are exceedingly interesting. In the meantime one welcome result of the reciprocity treaty will be to lessen the destruction of our forests by bringing in Canadian wood for the purpose of paper making. The extent of this demand may be shown by the fact, asserted by Mr. Norris, that last year we bought abroad pulp-wood and pulp to the extent of 1,716,000 cords, to make paper in American mills. We pay nearly twenty million dollars to foreigners for wood and pulp to keep American mills going.

STRYCHNINE AND ITS COMBINATIONS

Men give *nux vomica* in paralyses without looking to their cause, and in this way induce discharges without reflecting that they are exhausting what little remains of the nervous excitability. Matteucci proved that these shocks were detentanizing, so that it is rather in tonic or painful spasm that strychnine should be employed. Hence its good effects in neuralgias. If congestion is present, aconitine should be added. When there is a disharmony or a rupture of the vital equilibrium, hyoscyamine should also be employed. This combination is especially useful in esophagismus, and in dysuria, where the dynamic obstacle can only be removed by the two, strychnine acting upon the longitudinal and hyoscyamine upon the circular fibers.

But it is especially to restore the general tone of the economy that strychnine is useful. Place the end of a finger in the ear—the acuteness of the sound heard will depend on your force or feebleness at the moment. It will be low if fasting, acute after a full

meal. Take a fair dose of strychnine and it will become hyperacute. We are then a vibrating machine, a sort of Eolian harp, and the impressions coming upon us from without provoke vibrations according to the tension of our fibers. When this is too great the vibration is painful, and the contrary is the case when the cords are relaxed. The machine must then be tuned. Here is the ancient doctrine of *strictum* and *laxum*.

We gather from these facts some valuable therapeutic indications. Quinine in overdoses causes ringing in the ears. Strychnine is the vital key, since by it we can attune the diapason necessary for the harmony of the organic functions. Morally and physically, such tuning up results from strychnine.

Strychnine must not be given in cerebral softening. Magendie remarked that the effects of strychnine were more marked on a paralyzed side. In ataxy we have not marked any good effect from strychnine, because there is a sclerosis with atrophy of the nervous substance. It finds its place when we wish to stimulate either sensation or motion, the former returning first in paralyzed parts—an indication to persevere with the remedy. Some local palsies are better modified by strychnine than others; for example those of the eye and face. Gubler observed that many amblyopias are benefited by strychnine, probably those dependent upon atony of the muscles of accommodation. Strychnine is serviceable in tremors, alcoholic or saturnine, if there is no nervous lesion.

Whenever strychnine is to be continued for a long time, the dose should not exceed 1-12 to 1-10 grain a day, gradually increased to 1-6 grain. The hypophosphite of strychnine is especially useful, as phosphorus is a needed nerve reconstructive. Fats should also be given, especially those from fish.

In acute cases—in the nervous disturbance preceding grand inflammations—strychnine should be given from the beginning, *coup sur coup*; 1-134 grain every quarter-hour, then every half-hour until reaction is established, as shown by pulse and temperature. There may be need also for aconitine, veratrine, digitalin, even for venesection. The life of the patient may depend on this treatment. In traumatism it should always be

at hand; so in algid fevers, choleras or pernicious fevers. Unless we begin by arousing vitality it is clear that absorption can not take place, and the patient will perish in a mild asphyxia, when his body dries up and passes into a cadaveric state in the midst of the most atrocious cramp-like pains. Strychnine and hyoscyamine given together render the most signal service in these cases. Give 1-134 grain of each every quarter hour. At the same time it is necessary to restore heat to the skin by energetic friction, assuaging thirst by little pellets of ice. Reaction once established, a new attack may be prevented by adding quinine hydroferrocyanide to the strychnine, ceasing the two only when pulse and temperature have returned to normal.

Stimulation is not obtained by burning the mucosa with volatile oils. This is an expenditure of force, adding its exhaustion to the others. But rubificants are often the only resource left to the practitioner.

Castro says: Strychnine, beside the excitomotor properties generally recognized, possesses also that of destroying the intolerance for certain indispensable medicaments, which can not be replaced, induced in some by idiosyncrasy, by the special quality of the disease or by the insistence necessary in the administration of medicines. This induction of tolerance does not annul or modify the therapeutic properties of the substances constituting the principal medication. There are four indispensable medicaments: strychnine, aconitine, veratrine and hyoscyamine; and the tolerance production of strychnine is to be noted especially as related to the three others. If strychnine is administered with either of them, the characteristic effects of the latter will be induced by smaller doses than when strychnine is not given.

It's these seemingly superfluous efforts that count—the work you do for the love of working, not what you do within working hours and merely because you are paid for it.—Cushman K. Davis.

THOSE AWFUL GALENICS

I cannot comprehend why people stick to the galenics when they ought to know better. The faults of this class of remedial agents have been sufficiently told, and every-

body should know them. Doctors also know that they do not have to use galenical preparations, but that there are better ones to be had; yet, so strong is the habit that they continue in the same old blundering way.

There is absolutely no answer to be made to the objections to these preparations. Granted that jaborandi, hyoscyamus, gelsemium and opium do contain, respectively, pilocarpine, hyoscyne, gelseminine, and morphine, still, no two specimens contain exactly the same proportions; so that, unless they are assayed, we always have to stop for experimenting to find out how strong our preparation will turn out to be. Then, the strength never remains the same from one day to another, because from evaporation of the menstruum and decomposition of the active principles the actual strength varies continuously. And, still further, even with the assayed preparations, we have to experiment to find out what each particular lot will do.

But the worst of it is that, beside what we want, these and nearly all other vegetable drugs contain other constituents which we do not want. Thus, jaborandi contains pilocarpine, which causes sweating; but it also contains jaborine, which stops sweating. Hyoscyamus contains hyoscyne, which induces sleep; but it also contains hyoscyamine, which banishes sleep. Gelsemium contains gelseminine, which sedates the spinal cord; but it also contains gelsemine, which stimulates the spinal cord. Opium contains morphine, which does what we all know about; but it also contains thebaine and a whole lot of other active principles, which do lots of other things, some of which we know and others we do not. Uva ursi contains arbutin, which soothes the bladder most beautifully; but it also contains a whole lot more tannic acid, which does plenty of things to which we very decidedly object.

And so we go through the whole of our materia medica. There is not a solitary article in it which we can use in the form of the galenic preparations, with full certainty of just what it is going to do, and how much of that same thing it is going to do.

The simple truth is that many of us have accustomed ourselves to these things, have

learned to allow for them, and would no more know how to get along without them than the woman did after she had a tumor removed. She had been so used to grumbling about that tumor, to nursing it, considering it, that she had practically regulated her entire life by it, and missed the blamed thing when it was removed.

The principal difficulty is that the physician does not realize what a pleasure the practice of medicine becomes when one knows exactly what his medicines are going to do.

Emerson says, "A great institution is the lengthened shadow of one man." That is, one man's spirit runs through and pervades every successful institution. He keys the symphony.—Elbert Hubbard. And what is true of the institution may be true of the community—your community. If you sufficiently develop the strength and sweetness of your character it will be photographed upon the lives of every man and woman with whom you come in contact.

PULMONARY EDEMA

Dr. Haven Emerson, in *The Archives of Internal Medicine*, calls attention to some observations made by him as to the application of artificial respiration in the treatment of edema of the lungs. The suggestion is based upon experiments with adrenalin, which was given to animals in increasing doses until edema of the lungs had been induced. Under the use of massive doses of this remedy respiratory movements are exaggerated, later becoming feeble and spasmodic, and the animal dies of asphyxia due to flooding of the air-spaces of the lungs with blood-serum. We quote Dr. Emerson as follows:

"If, when we find respiration showing definite signs of beginning asphyxia, when the veins are becoming distended and deepened in color, cardiac insufficiency is established and the incompetency is increasing, when we can hear moist râles over the lungs, and when we know that cardiac insufficiency is established and the incompetency is increasing, we then apply artificial respiration, through the tracheotomy tube, gently distending the lungs and allowing them to collapse with or without suction, we shall find presently an amelioration in the animal's condition.

"When the artificial respiration is discontinued, after about half an hour the

animal is able to breathe normally and shows none of the signs of insufficient circulation or respiration. The effect of the adrenalin has worn off, the heart-muscle has recovered from its acute overloading, the pulmonary circuit is no longer engorged with regurgitated blood, and to all intents and purposes the heart and lungs are again performing their functions normally.

"With a heart just able to maintain its competence under favorable conditions, even if it is not the seat of myocardial degeneration, insufficiency is easily precipitated and pulmonary edema is likely to be developed unless the failing heart action is of very brief duration. Under such conditions as I have above described, I believe it would be a valuable aid to the necessary modification if artificial respiratory movements were used.

"I think such treatment would be indicated whenever the edema and cardiac incompetence are of sudden development and are due to causes which are likely to prove of brief duration or can be removed by appropriate treatment. Edema, when due to cardiac failure in the course of pneumonia or appearing as the inevitable terminal feature of a chronic endocarditis, could not be expected to respond to such temporary relief as artificial respiration would offer. Moreover, I hope I shall not be misunderstood as advocating forced respiration by intubation or tracheotomy, for I certainly think such measures would be quite unjustifiable. My belief, based on experimental observations, is that artificial respiratory movements, directed to establishing a rhythmical expansion and contraction of the thorax, are worthy of clinical trial in cases of acute cardiac insufficiency accompanied by edema of the lungs."

DON'T BE CONTENTED

Poets have sung and philosophers have philosophized over the beauties of contentment. From our earliest childhood its desirability has been dinged into our ears, and every attempt at altering our conditions for the better has been squelched by the wiseacres, and their maxims that teach one

to be satisfied with his life and to make no attempt to improve it.

Nevertheless, all progress is founded primarily on discontent. As it gets cool toward morning in these winter nights, is it better to lie still and shiver, or get up and close the window and turn on the heat? If the income is insufficient, why not use one's wits to earn more?

This is the day of the kicker, of the grumbler. The man who does not like things as they are, and kicks about it, is more likely to find an improvement coming than the man who meekly accepts what comes to him and lets it go at that, and thereby only encourages others to make further encroachments upon him.

We preach the gospel of discontent, of constant striving for something better than we now possess. Nothing is good enough if better can be imagined.

And, truly, the world grows better. Time was, in the recollection of those not yet very aged, when it was by no means uncommon to see men and women drunk on the streets. There may be as much liquor drunk as before, but people at least keep it out of sight. Reading Fielding and Smollett's novels, we conclude that in their day it was considered somewhat disgraceful for a man to be so sober as to go to bed without assistance. Certainly nothing of the kind is tolerated today in polite society.

When the honest old farmer went to the legislature, and, after two years spent there on a salary of eight hundred dollars a year while expenses were fifteen hundred, came home with ten or twenty thousand dollars saved up, the incident was productive of hilarity rather than of reprobation. The election of a United States senator had much to do with our bucolic friend's prosperity; and we knew it, but took it as a matter of course. Nowadays we will not stand for anything of the sort.

Not many years ago, when consulted by a patient suffering from vesical disease, we simply hunted through our materia medica, noted the five or six remedies supposed to influence favorably the human bladder, and prescribed them, trustfully hoping that something or other in the conglomerate mess would do good. Now we select arbutin as

the beneficial agent in all, and give it alone.

In therapeutics we have progressed to the point where there is a loud and deep demand that the physician, in prescribing medicines, shall know why he prescribes them and what they are going to do. When a man dies of ileus, we no longer saddle it upon the Almighty as one of His mysterious dispensations, but we ask why the surgeon was not called in aid in good time.

Diagnosis fifty years ago was often a guess; now we demand that all the resources of physical examination, all of the aid which the laboratory can give us, shall be brought to bear on the task of ascertaining exactly what is the disorder in any case.

Truly, nothing is good enough if better can be obtained. The man who stands still, content with his acquisitions, is by that very fact a back number. Nevertheless, the new is not necessarily the best, and there often are values in what we give up that we can ill afford to lose.

THE SYNERGISM OF DRUGS

Some years ago the writer announced, from his studies, that when hyoscine and morphine were administered simultaneously, the anesthetic and analgesant effect of the combination was greater than when proportionate doses of either remedy were given alone. This he illustrated schematically by saying that, if the effect of the morphine were calculated at thirty, the hyoscine at twenty, the effect of the combination, instead of equaling fifty, was something more like eighty or ninety. This conclusion, based entirely on clinical study, was received with ridicule.

The following quotation from an article by Leipoldt in *The Lancet*, February 11 (p. 369), is somewhat significant:

"A few points stand out clearly, and it may not be without interest to draw attention to Burgi's recent elaborate series of experiments in which a large number of combinations have been tested. These conclusions have not been challenged, on the contrary, more recent work by Italian critics seems to confirm Burgi's work in substance. He found, what was known already clinically,

that two narcotics introduced simultaneously or shortly after each other have a much more powerful effect than when a total quantity of one narcotic, equivalent in strength to the combination, is administered.

"Madelung, working with scopomorphine, found that this combination very powerfully increased the anesthetic effect of ether. Neu's and Rocchi's results were similar with regard to an atropine-morphine combination; and as early as 1880, Surmav pointed out that a preliminary dose of chloral enabled the anesthetist to use a much smaller quantity of ether. Rave in America and Franck of Bordeaux reported similarly with regard to other combinations. Much more recently Wolffsohn has laid stress on the important summative effects of small quantities of a narcotic drug, not in themselves sufficient to produce any appreciable degree of narcosis, influencing the rapidity of action of general anesthetics."

I cannot praise a fugitive and cloistered virtue, unexercised and unbreathed, that never sallies out and seeks her adversary, but slinks out of the race where that immortal garland is to be run for, not without dust and heat.—Milton.

STATUS OF THE MONGOLIAN PLAGUE

At the Edinburgh Medico-Chirurgical Society meeting, held January 11, J. C. Thompson presented a paper on "The Present Treatment of Plague." He reviewed the well-known prophylactic measures, including the rapid extermination of possibly infected rats; the destruction of fleas; inoculation with Haffkine's prophylactic serum of persons possibly exposed to the bites of infected fleas; the same arrangements for disinfection as in typhoid fever, except in cases of a pneumonic type, which required the most complete measures possible; and careful nursing.

The tendency to heart failure renders the recumbent position essential while acute symptoms last. Delirious patients must be restrained mechanically. The bladder must be attended to. The food should be bland, liquid, and given in small quantities at frequent intervals until the acute symptoms subside. Water should be freely given or even forced on patients. The use of cardiac stimulants should be a routine practice in

all cases from the very first, since great prostration is manifested within a few hours from the outbreak. Some symptoms that may prove urgent are constipation, diarrhea, high fever, headache, delirium, insomnia, hemorrhage.

The consensus of opinion is against the excision of the bubo. Many buboes in those who recovered resolved without suppuration. Antiseptic injections about the bubo are of no value. Sometimes there might be seen on a limb, below the bubo, a papule with an inflamed base and a clear vesicle, the contents of which swarmed with plague bacilli. Destruction of this papule by deep cauterization with phenol was usually followed by abortion of the disease.

The indolent ulcers and so-called carbuncles were manifestations of general depression, and their treatment was based on general principles. The introduction of phenol, 80 grains a day, in 204 cases, seemed of little value. In another epidemic, 144 grains daily, in a series of 143 cases, gave a mortality of one-half the preceding; but this ratio obtained in the second half of the epidemic, when the disease was normally less virulent. In the earlier half of the epidemic oil of cinnamon was used, but it proved valueless. Further experience confirmed the view that phenol was of undoubted value.

Serum treatment afforded decidedly unequal results in the hands of different practitioners. Experiments in India seemed to indicate that mortality was little affected by the use of any serum, but the course of the malady was favorably influenced when serum was administered on the first day of the attack, the Yersin-Roux serum of the Pasteur Institute giving the best results.

Dr. Thompson's summing up of the present condition of the treatment demonstrated that it is exceedingly unsatisfactory, and that the chief reliance must still be placed on careful nursing and general management.

It may be said here that the principles of treatment applicable in all infectious fevers should be followed in this perplexing visitation. The bowels are first emptied with calomel, saline laxatives, and colonic flushes; then disinfected by the free use of the sulphocarbolates. The leukocytes should be reinforced and energized by nuclein in full doses,

hypodermically or intravenously administered. The infectious element must be opposed by saturation with calcium sulphide.

As to the variant treatment, constipation demands the morning laxative saline; diarrhea calls for the sulphocarbolates; fever usually requires the dosimetric triad of aconitine, digitalin and strychnine arsenate. Headache subsides under these, but if not, gelseminine is the remedy; this also for delirium and insomnia. Hemorrhages require atropine or hydrastinine. The debility may demand strychnine to be pushed, beside a carefully arranged dietary.

REFORM AND TRUSTS

Our editorial on "Reform," in the February issue of this journal, has elicited a good deal of interesting comment. One correspondent in particular calls our attention to the fact that the trust is a necessary outgrowth of the development of social conditions in this country. We have passed the pioneer stage. The pioneer and his virtues are things of the past. Density of population has increased until we crowd each other and elbow-room grows scarce. Just in proportion as we approximate the crowded conditions of Europe, so the organization which distinguishes European countries is forced upon us. We can no longer afford to waste our efforts in useless competition.

Take the Oil Trust, for instance, as the most heartily detested of all the brood. It has nevertheless given the whole country a standard quality of oil, and has, by the methods made possible through its monopoly of the business, instituted innumerable savings and utilized innumerable products that would otherwise have remained as worthless waste; beside lowering the general level of prices of that line of products, not possible under the small-scale system.

Organization eliminates enormous expenses previously wasted in competition. It reduces the cost of necessities, and sets free numberless employees whose energies may be utilized in other directions.

There is always a place where labor is needed. The balance between the production of food and the mouths that consume it is always an exact one. There is never a

surplus of food. The development of the resources of our own and other countries furnishes employment for untold billions of capital, so that which is rendered unnecessary by the aggregation of industries into trusts still finds employment in other directions.

Of capital and of labor there never is a surplus. Millions of acres of land in our own country, in nearly every state of the Union, still await the advent of the plow.

These truths would be better understood and more generally admitted, were it not that they are obscured by the greed manifested by the trusts—needlessly, we believe. It seems possible that, impatient because the real benefits afforded by organization are not at once appreciated and due credit given to the organizers, they hastily assume that the public is made content by nothing; and since they are sure to be blamed, they might as well get out of the job whatever is possible—exactng the limit the market will bear.

ON VACCINE THERAPY

In *The Practitioner* for September, last year, Dr. J. Horder, of the St. Bartholomew Hospital in London, raises several notable objections to the indiscriminate administration and appreciation of vaccine treatment as it is at present in vogue in England. As a clinician he is convinced of the great value of this mode of treatment in many cases, but he insists that we lack as yet every objective proof supported by statistical evidences for the superiority of this method over other methods which had hitherto been employed. He emphasizes among other things the danger when the patient is treated by a theoretical bacteriologist instead of by a physician with clinical experience.

Horder deplores the fact that it is so widely customary no longer to ask what condition we are treating, but only to inquire after the bacillus that may be present, and that a diagnosis of bacillus coli may be made, for instance, where we are dealing with a retro-peritoneal sarcoma. He admits the saying, "The physician of the future will be an immunizator," with the provision that the immunizator must not cease to be a physician.

It is strange, but only too true, that as a class physicians, like the Athenians of old,

never cease to chase after new idols, and to worship fetiches and fads, only too often to the entire exclusion of all conservative and common-sense reasoning. If a certain cause has in one instance been productive of a certain effect, we are altogether too prone to generalize, and we are all too apt to say that if a equals m and perhaps b equals m , x must equal m also, without determining whether $c, d, e, f, g, h, i, j, k, l$ equal m without drawing at least a probable conclusion as to the likelihood of and possibility for generalization.

We can say that the treatment of all sorts of infectious conditions by means of vaccines, whether heterogenic or autovaccines, has become a fad to an undue extent. In the conditions in which the principles of immunity are involved for the institution of etiologic treatment, it is more than almost anywhere else necessary that these problems should be studied most carefully and that we should not act blindly or hastily. Vaccines and bacterins as well as culture extracts are not only very powerful remedies, but they are two-edged swords, capable of producing woe as well as weal, capable of doing serious harm as well as of doing good.

It is to be deplored that the biologic remedies are employed indiscriminately, and that the old remedies, well established as they are, and well prepared in their latest and frequently definite and positive form, are put aside while we forget that by means of these remedies we have been enabled, hitherto, to stimulate the organism to accomplish the same work which it is sometimes whipped into doing by excessive doses of bacterins.

Drug treatment sets in motion certain biologic processes which alter the process of immunization in a manner much greater than we had ever a conception of. The study of drug effects has entered, under the impetus of biological and biochemical investigations, into a new phase, which will vindicate the important position which active and potent drugs have occupied for many years. We shall find out eventually that, however excellent bacterins and vaccines may be in their proper places, we very frequently can obtain the same results, at least as well and with less likelihood of doing harm, by the properly selected drug remedies.



The Active Treatment Of Pneumonia*

A Record of Experience with Two Hundred Cases

By W. C. WOLVERTON, M. D., Linton, North Dakota

EDITORIAL NOTE.—Dr. Wolverton lost only one case in one-hundred and forty-one patients treated for lobar pneumonia; only five out of fifty-nine who had bronchopneumonia. Results like these, so much out of the ordinary, must command attention, and certainly his ideas concerning the treatment of this dread disease deserve the closest study.

THERE are certainly few, if any, more important problems before the medical profession today than that of an effective treatment of pneumonia; especially in the face of recent statistics, which show that in Chicago, during the year 1910, pneumonia has caused the death of more persons than did tuberculosis, typhoid fever, diphtheria and scarlet-fever combined.

We are doing nothing toward the solution of this problem. We seem satisfied with depending upon the so-called "expectant treatment"—which amounts practically to doing nothing at all until forced to act—and expecting from 20 to 50 percent of our patients to die; an expectation quite generally realized when this so-called treatment is followed out.

We are told that "pneumonia is a self-limited process which runs a definite course, and is uninfluenced by any known method of treatment." But, Osler to the contrary notwithstanding, every country practitioner knows that much can be done to alleviate the suffering of all pneumonia patients, to ensure the recovery of almost all of them, shorten and mitigate the course in many cases, and, if the patients are seen early, to

jugulate or abort a considerable proportion of attacks.

My Experience With 200 Cases

During the past six years, the writer has treated two hundred cases of pneumonia, or, if you will, what would have been pneumonia had they been treated by the "expectant" plan. By the latter are meant those numerous cases which we all see, quite often, during the first, or congestive, stage, which is the time favorable for "jugulating" or "aborting" an attack.

Suppose a patient exhibits the following set of symptoms: Severe initial chill, following exposure; a sharp rise in temperature, of pulse and respiration; harrassing cough; lancinating pains in the lateral region of the chest; scanty, viscid, rusty (or blood) sputum; flushed face, often most marked on the affected side of the body; and physical signs of beginning consolidation of lung-tissue. If such a patient has not fully-developed pneumonia, how long will it be until he has it?

Of the 200 cases treated, 141 were of the lobar or croupous type, and the remaining 59 cases were those of bronchopneumonia. Of the entire 200 cases, 100 were males and 100 females; 23 occurred in infants under

*Read before the Sixth District Medical Society, Bismarck, N. D., Feb. 14, 1911.

1 year of age (bronchopneumonia); 20 were between 1 and 2 years of age (bronchopneumonia); 42 were between 2 and 5 years (mostly bronchopneumonia); 21 were between 5 and 10 years of age; 18 between 10 and 20 years; 23 between 20 and 30 years; 25 between 30 and 40 years; 12 between 40 and 50 years; 6 between 50 and 60 years; and 10 of the patients were over 60 years of age.

Of the 59 bronchopneumonia patients, 5 died—a mortality of a little less than 8.5 percent; of these 5 cases, 2 were less than 1 year old, and the other 3 were less than 2 years of age. One of the 5 fatal cases was that of an Indian infant, at Ft. Yates, moribund when first seen, and the child died within a few hours. Another of the fatal cases was that of a child which died of an attack of bronchopneumonia following shortly after a long siege of cholera infantum.

Of the 141 cases of lobar-pneumonia patients, only one died. This was a 40-year-old alcoholic who had safely passed the crisis and then, owing to foolish exposure, contracted a second attack.

As to the treatment employed, all these patients were treated actively from the start.

Management of Incipient Pneumonia

When seen within twenty-four hours after the initial chill, the first step is the administration of a quick-acting purgative; the writer likes especially a combination of from 65 mgm. to 20 cgm. each of calomel, jalapin and phenolphthalein. In many instances an enema is given while waiting for the purge to act. A clean gastrointestinal tract will do much in avoiding autotoxemia, and gives a clean mucosa from which medicinal remedies may be readily absorbed.

To relieve the pulmonary congestion, restore circulatory equilibrium, quiet the excited heart, lower the hypernormal temperature, and induce diaphoresis, veratrine and amorphous aconitine, in doses of 1-2 to 1 milligram (1-134 to 1-67 grain), each, dissolved in hot water, are given every fifteen minutes until a distinct impression is made upon the pulse-rate, the temperature begins to fall and the skin to become moist. The interval between doses is then lengthened to a half hour, and finally to one or two

hours, as necessary. The dose is small, given frequently to effect, and thereafter as the individual case may demand. The foregoing dosage is for the average adult.

In asthenic cases, these active remedies must be used more cautiously, and may be safeguarded by the addition of digitalin or strychnine. The combination of aconitine and veratrine with digitalin may seem like a therapeutic incompatibility; but Ehrlich's studies in selective cell action, in taking unto themselves such substances as they may require, helps to explain why this combination does work well in practice.

In giving aconitine and veratrine to children, it is well to add strychnine, and to follow Shaller's rule of dosage, viz.: in 24 teaspoonfuls of hot water, dissolve 1-2 milligram (1-134 grain) of each of the above-named alkaloids for each year of the child's age, plus an extra 1-2 milligram (1-134 grain) of each. Of this solution a teaspoonful is given at the intervals as stated for adults.

With no other treatment than the purge and the use of the defervescent remedies as outlined above, many cases may be jugulated, or "aborted," as you will, if seen early. Few cases so treated go to a typical crisis; most of them end by lysis in from three to six days. If the case is first seen after consolidation has taken place, we cannot hope to jugulate the disease; but the defervescent drugs may still be cautiously administered to advantage. This defervescent treatment is perfectly safe, if conducted as above described, and will give nothing but good results.

Local Measures Are of Value

However, there are many other measures which are of great value in the treatment of pneumonia. One of these is the application to the entire chest, by inunction, of a mixture of equal parts of guaiacol and camphorated olive oil, or equal parts of guaiacol, oil of eucalyptus and methyl salicylate, repeated every two to four hours. Another is the application of a cotton jacket, made by lining an ordinary undershirt with a thick layer of absorbent cotton, the latter held in place by a few stitches. After each application of the guaiacol mixture, profuse dia-

phoresis unfailingly takes place within fifteen or twenty minutes, with a fall in temperature; and the patient often speaks of experiencing a feeling of euphoria.

The cotton jacket does not impede respiratory movements, and is very agreeable to the patient. One precaution which must be observed in its use is, that during convalescence only a little of the cotton should be picked out from day to day, as a sudden removal of all of the cotton might result in a fresh attack.

Since the writer has begun the use of guaiacol inunctions, he has not lost a case either of lobar or bronchial pneumonia, and he believes that it is a remedy of exceeding value.

Remedies for the Cough

For the cough, a mixture of ammonium chloride, codeine or heroin, fluid extract of glycyrrhiza, and bitter-almond water is given from the start, this aiding in thinning and loosening the secretion and sedating the cough. This mixture also has the virtue of palatability, and even small children do not object to its taste. As soon as resolution begins, potassium iodide is added to the mixture.

Since the writer has repeatedly seen excellent results from the external use of guaiacol, it has occurred to him that the addition of creosote carbonate to the foregoing cough mixture would be in the nature of an improvement, as creosote has such well-marked properties as a pulmonic antiseptic, while its carbonate is practically tasteless.

A refreshing draught, during an attack of pneumonia, is the old "potus imperialis," or cream of tartar lemonade. It aids excretion both by kidneys and bowel; and its cooling, acid taste is very refreshing to the patient.

The Period of Cardiac Crisis

Strychnine and digitalin are reserved for the crisis, or for emergencies; but when given, they must be given in large doses if results are to be expected. In Merck's "Index," the dose of Germanic digitalin is given as from 6 to 30 mgm. (1-10 to 1-2 grain).

In case of cyanosis and impending cardiac failure, nitroglycerin is the remedy *par excellence*. A fact which is not well known is,

that nitroglycerin is more quickly absorbed from the lingual and buccal mucosa than when administered hypodermically. This may readily be demonstrated by allowing a granule containing 1-2 milligram (1-134 grain) of the drug to dissolve on (or under) the tongue, when its effect upon the cerebral vessels often will be felt within a minute.

Oxygen is an exceedingly valuable agent in pneumonia, but is seldom used early enough. Since we now have the small, compact generators, with their handy cartridges of sodium peroxide, oxygen is always accessible; and its early use gives such gratifying relief to the patients that it should be given in every instance where dyspnea or very rapid, shallow respiration is a symptom.

To some patients an ice-bag gives relief from the distressing pleuritic pain; others cannot tolerate cold, and to them a hot-water-bottle is very grateful. In any case, the continuous application of an ice-bag is at least theoretically wrong, as cold is applied to produce circulatory reaction, and a continuous application of cold will not permit of reaction, i. e., secondary hyperemia of the superficial structures following upon their primary ischemia. Cold or tepid sponging does produce circulatory reaction; bringing the heated blood from the congested lung to the skin, where heat radiation takes place, with a consequent lowering of the temperature, and healthy cutaneous function is promoted.

Toxemia calls for enteroclysis, and, in extreme cases, for hypodermoclysis of physiologic saline solution.

The food in lobar pneumonia should be extremely limited or entirely withheld, as the disease is of short duration, and a digestive disturbance may cause a fatal termination. In bronchopneumonia, however, it should be highly nutritious and given as generously as can be tolerated.

Applicability of the Bacterins

Lastly, another remedial measure has lately come to the writer's attention, and has been made use of by him in his last six cases. This is the use of bacterins, or "bacterial vaccines," after Wright's method, whereby the patient's resistance (opsonic index)

against the invading living microorganisms is raised by the subcutaneous injection of a known number of the corresponding dead bacteria.

Since we know that in many cases of pneumonia much of the toxemia is due to streptococci and staphylococci accompanying the pneumococcic infection, the writer has used a mixed vaccine consisting of pneumococci, streptococci and staphylococci. The results obtained in the small number of cases in which this opsonotherapy was used encourage him in giving it a more extended trial. In at least two of the six cases the

recovery was startlingly sudden, no other treatment having been employed.

Of course, it goes without saying that every case of pneumonia is a law unto itself so far as treatment is concerned, and each one will present special indications which call for special therapeutic measures; but the use of the remedies named in this paper has given such excellent results in the hands of the writer that he feels impelled to recommend them to the attention of this Society just at this time, when "the Captain of the Man of Death" is reaping his annual harvest.

Scientific Medicine Versus Quackery*

Should Ignorant Laymen Be Permitted to Treat the Sick?

By WILLIAM J. ROBINSON, M. D., New York City

President of the American Society of Medical Sociology; Editor of *The Critic and Guide*, *The American Journal of Urology*, and *The Medical Review of Reviews*

EDITORIAL NOTE.—*This address, which was delivered before The Brooklyn Philosophical Association, December 18, 1910, is the most forcible presentation we have ever seen of true, scientific medicine, as compared with quackery in all its forms. Not only should every physician read it carefully; he should also put it into the hands of other physicians, and be prepared to bring its irrefutable logic to the attention of the people of his own community.*

III.

The Medical Institutes and Quacks in General

I SHOULD not consider my lecture complete if in conclusion I did not refer to the quacks and the quack institutes in general. Those advertising quacks and quack institutes are a greater plague to this country than the cholera ever could be, and are probably responsible for more misery and deaths than is the terrible scourge of tuberculosis.

In my specialty I see cases every day that make one's blood boil. A person has a little pimple on his genitals: it may be herpes, may be due to a little irritation or scratch, may be due to the bursting of a little blister, or to the itch. If such a person

gets into the hands of those advertising quacks, then the Lord have pity on him! That gentry will frighten the life out of him. They will convince him that he has syphilis in the very worst form; and then will proceed to bleed the poor fellow as long as he has, or as long as they think he has, a dollar left. But at the same time they will ruin his health and his stomach by nauseous medicines, pills and tablets—for they have to show him that they are giving him something for his money. I have had numerous such patients, who came to me with the diagnosis of syphilis from the medical institutes and quacks, most of the sores proving nothing but mild abrasions or local irritations.

The same is true of gonorrhea. When these harpies get a gonorrheal patient, they torture him to death. They make him better, then they make him a little worse, then again better, over and over. And in spite of the so-called guarantees to cure, when the patient is no longer able or is unwilling

*This splendid address should receive the widest possible publicity among laymen. To facilitate this, the publishers of *CLINICAL MEDICINE* will reprint the article (when it is completed) in neat pamphlet form. These pamphlets will be sold at \$2.00 per 100. Every doctor who wishes to fight quackery should secure a supply and distribute them widely. Send in your orders today.

to put up more money, he is kicked out, the door is shut in his face, and he is forbidden to come again. They know that, in spite of their written guarantees, no patient will be willing to go to court, and thus bring to light the fact that he has a venereal disease.

Very often when such a patient applies for treatment to a real physician, he is in a most deplorable condition. We find him suffering with gleet, chronic patches in the urethra, quite often strictures from the use of too strong injections, and so on. And it often takes many months to undo the damage wrought by those dastardly quacks.

The same is true of sexual disorders. These are of too complicated a character to be understood or diagnosed properly by the quacks, and still it is here that they reap their richest harvest. By advertisement, circular and booklets, they make our young men and boys think that every case of nightly emission or masturbation is a dangerous disorder which will send them directly to the grave or to the madhouse, and when they succeed in enticing a youth in their clutches, they not only rob him of his last cent, but they generally succeed in making a nervous wreck of him. And then his name and address are given to other quacks, and he is overwhelmed with other letters, other "literature," assuring him that they can *positively* cure him or it will not cost one cent; and so similar alluring offers with fake testimonials are showered upon him to the end of his days.

You know—or you may not know—there are letter-brokers who make it a regular business to sell letters from sufferers from various diseases to different quack concerns. These letters are carefully classified, with remarks as to the social and financial standing of the patient. If you ever had the misfortune to become the patient of a quack, and he knows your right name and address, you may be sure that these will travel from quack to quack; in truth your name will go down to posterity.

The Quacks, and Tuberculosis and Cancer

What the advertising quacks and so-called medical institutes do to tuberculosis and cancer patients is too heartbreaking to speak about with equanimity. People in

the last stages of consumption or incurable cancer have been made, by the lying representations of the wretched quacks, to give up their last dollar, to mortgage their little homes, to travel perhaps hundreds of miles to the abode of such a quack—only to hasten the inevitable end.

Such abominable things are still going on now, though we are glad to say the government is becoming alive to its duty and our vigilant post-office has put several of the most dastardly consumption- and cancer-cure specialists out of business. Let us hope that they will succeed in driving all of these nefarious swindlers out of business or out of the country.

The Drug-Habit Fakers, and Their Methods

Another class of dastardly wretches that deserve prison for life are those scoundrels who sell "cures" for the morphine or cocaine habit, *which cures themselves are loaded with these drugs*; in other words, instead of curing the patient, they enslave him still more deeply. I referred to such a "cure" in an early part of this lecture. Here is the report of another such cure, which appeared in one of this week's journals (*Journal of the American Medical Association*, Dec. 10, 1910). As I said before, it is almost incredible that human depravity could reach such low depths, but the report is official, and unfortunately we must give it credence. Here is the case:

"Dr." J. W. Coblentz of Ft. Wayne, Indiana, has for several years operated a mail-order drug-habit "cure." When the government recently commenced investigating him, one of the post-office inspectors wrote under an assumed name, representing himself as a man who had been addicted to the morphine habit for about six years, and who was using about 15 grains daily. Coblentz replied that he could be cured in four treatments, and that the cost of treatment would be \$11. Advertising leaflets were also sent to this inspector, in which it was stated that Coblentz' treatment was a "permanent and positive cure for the morphine habit." By implication, the patient was led to believe that the "treatment" contained no morphine.

For instance, take this quotation: "A Word of Advice to the Victim of Morphine and Opium: The way to conquer the habit is to be determined. *Resolve that come life or death, never to touch the deadly drug.* Do not indulge in half-resolves. The enemy of all good only seeks this opportunity to tempt you. Do not take every cure you see advertised, for how easy it is to disguise the drug under the garb of a new cure and beguile the poor, unsuspecting victim into the belief of being cured while all the time he is taking the drug under a different name. I do not send out trial bottles. This is the method pursued by the medical shark. Half the time you receive your old drug (from whose clutches you are trying to escape) with the taste disguised. I can truthfully say that I can and will cure you if you will put your case in my hands."

The inspector sent \$11 to Dr. Coblentz and received seven packages of medicines. These were analyzed by chemists in the Department of Agriculture. *Four of the preparations contained morphine*, two were tonic tablets, and one was a laxative medicine. It was shown at the trial that the twenty-four-hour dose of the "treatment" sent by Dr. Coblentz to the person who was supposed to be using 15 grains of morphine daily contained 20 grains of morphine!!!

The post-office inspector testified that he had interviewed Dr. Coblentz, and that Coblentz had told him he was "treating" about twenty-five patients for the morphine habit, and that these patients had been under "treatment" for from five to twenty years! Coblentz also admitted that the medicine which he sold to patients for the cure of the morphine habit contained morphine in about the same amount as the patient was accustomed to using, and that this quantity was continued throughout. Coblentz is said further to have admitted that he had really never cured the appetite of anyone addicted to the morphine habit, but that the patients reached the point where he called them cured; however, they had to keep on using the medicines. Correspondence was submitted at the trial which showed that one of Coblentz' patients had been taking the "cure" for fifteen years and was still taking it!

In view of all the evidence, the acting assistant attorney general summed up the case against Coblentz as follows:

"The respondent is engaged in mailing letters and printed circulars to morphine habitués, and is soliciting and obtaining money from such persons by promising to cure them of that habit—that is to say, of the taste, desire and appetite for morphine; whereas, in truth, he does not intend to cure or try to cure such habit, but instead intends to furnish patients with a preparation containing substantially the same amount of morphine as they are accustomed to take, his purpose being to deceive such persons and to profit by their appetite for morphine and to get money out of them under false and fraudulent pretences of furnishing them a cure for the habit, when he is simply furnishing the drug itself and not a cure."

A fraud order was issued against the infamous quack and his Association.

There are hundreds of such frauds. I could go on all day relating to you such instances, such as the case of a New York quack who made a carpenter give up his life's savings of \$1,500 for a bottle of "radium," which was nothing but common water; I could tell you of the fakers that sell electric belts which contain about as much electricity as does this table, and for which they make the most outrageous, most fraudulent claims; I could tell you of the fellow who sells magic foot drafts; I could tell you of the magic-boots man; I could tell you of that miserable Munyon, whose ugly face has been staring at us from the pages of the newspapers for many years, and who has just this week been convicted and fined for misbranding his medicines, for palming off plain sugar as wonderful asthma and rheumatism cures; I could tell you of hundreds of the most ridiculous, most incredibly absurd, or most infamous and most dastardly ways of robbing the people of their money; but lack of time forbids. I wish to conclude with the expression of my most profound conviction, that sooner or later

Regular Medicine Will Be Supreme

Just as sure as I can be of anything, so sure am I that the future, the great glorious

future, of medicine is in the hands of the regular medical profession.

Regular medicine is not what it was a hundred or even fifty years ago. We have broken the chains of authority; we no longer follow blindly the *dicta* of leaders; we investigate and analyze all statements regardless from what source they may come; heterodox opinions are now given space in almost all our journals; and what is of the utmost importance, in the profession itself there are thinking and fearless critics who are not afraid to point out our weaknesses, to ridicule our foibles, and to guide us to the right path. And let us remember that all the accessory aids which are required for the progress of medicine—the microscope, the bacteriologic laboratory, the physiologic laboratory, the chemical laboratory, all the physical instruments of precision—are in the hands of the regular profession, and not in the hands of the quacks.

And let us further remember that every discovery of any importance within the past half or three-quarters of a century—anaesthesia, antiseptics and asepsis, diphtheria antitoxin, the x-ray, Finsen light, radium, antimentingitis serum, the role of the mosquito in the transmission of malaria and yellow fever (a discovery which alone is worth billions of dollars to the human race), the isolation of the active principle of the suprarenal gland, the introduction of cystoscopy, the discovery of the tubercle bacillus, the gonococcus, the spirochæta pallida, the Wassermann reaction, Ehrlich's "606," in short, every discovery of importance either in sanitation, prophylaxis, medical and surgical treatment or in diagnosis of disease—has come from the hands of the regular medical profession or those directly connected with it.

Lastly, let us also remember that the requirements for entering upon a medical career are becoming higher and stricter, the preliminary education is of a higher character, and the course itself is more extensive and better in every respect.

Nil desperandum. The future of medicine is in the hands of the regular medical profession, and we are tolerant enough to take in everybody who is sincerely desirous of practising scientific medicine, even if he

happened to graduate from a sectarian college. But we do not want ignorant and presumptuous quacks. For the sake of the people we must keep them out.

In concluding this general survey, I will now give you a summary of what I have said:

Summary and Points of Emphasis

1. The human body is a very complex and very delicate organism. To understand its normal mechanism (its physiology), and its abnormal derangements (its pathology or disease), requires years of theoretical study and practical experience.

2. The public is not capable of judging as to who is and who is not a competent physician, any more than it is capable of judging as to who is and who is not a good steamship captain, a good electrician, a good chemist, a good engineer, a good astronomer, a good mathematician. Only competent boards from the respective professions or trades can decide that more or less satisfactorily.

3. Without laws and regulations for the practice of medicine, the country would be overrun by ignorant conscienceless quacks, deceiving, cheating and preying upon the public, and the damage to the people's health and the increase in mortality would be something fearful.

4. To talk of free competition in the practice of medicine shows a defective mentality. Medicine is not a trade like selling shoes or clothes. When a person has had his health ruined or has been driven to an untimely grave, then it is no consolation to him or to his relatives to know that the doctor who treated him was an ignorant unlicensed quack. It is too late. The quack should not be given the opportunity to succumb in the survival-of-the-fittest struggle *after* he has done incalculable damage; he should be prohibited from entering into the struggle; he should not be punished after his misdeeds, he should be prevented from committing any.

5. The laws that we demand for the regulation of medicine are, most emphatically, not for the protection of the medical profession, but for the protection of the people. We are willing to admit anybody to the practice of medicine who can give proof that he is more

or less competent to perform the delicate duties of a physician.

6. That there is incompetence and ignorance in the medical profession is admitted, but the remedy for that is not letting down the bars for all comers to enter, but raising them still higher, so that eventually only really competent and intelligent men and women may be entrusted with the heavy responsibilities of healing the sick.

7. The regular medical profession is aware of its shortcomings, but it is honestly trying to eliminate them by raising the standard of preliminary education, by enlarging the curriculum, by increasing the number of years required for completing the medical course, by extending the laboratory facilities, by recommending hospital experience as an obligatory part of medical study; in short, it is doing everything in its power to raise the standard of the physician of the future. While as to the quack, all *he* demands is the abolition of all criteria, of all standards, of all educational requirements.

8. The statement that drugs are absolutely useless, and never are of any benefit in the treatment of disease, proceeds from ignoramuses who have not used and are not familiar with the action of drugs. I make the positive statement that there is not at the present time *a single physician of any eminence* who denies the value of drugs. He may object to the abuse of drugs, to too great reliance on them, but not to their proper use. And there is not a single physician who does not use some drugs occasionally. And what's more, the fakers who publicly decry the use of drugs as poisons use some few drugs in their practice, in secret. But of course the drugs they use are "all right," because they are "mild and harmless"—so they say.

9. The idea conveyed by quacks, physical culturists, naturopathic (so-called) doctors, osteopaths, and that ilk, that the scientific medical profession treats by the means of drugs only, is utterly false. There is not an agency in the world, material or immaterial, which the regular profession does not use in the treatment of disease. As to diet, it is an important subject of study with us, and the real advances in the science of dietetics and the nutritional value of foods are made by the medical profession, and the physiologists and chemists who work hand in hand with it.

10. No conciliatory attitude is to be adopted with the Christian scientists, mental healers, absent-treatment quacks, osteopaths, chiropractics, etc. The greater part of their claims is impudent fraud, while the grain of truth in some of the cults is incorporated in the regular system of medicine.

11. As to various quack institutes, consumption and cancer specialists, lost-manhoo professors, etc., etc., they should be treated as ordinary bunco-steerers or highway robbers are. They are worse than common thieves. They deserve no consideration, as they show none toward suffering humanity. Unless agreeing to give up their practice absolutely, they should be driven out of the country or put behind prison bars.

12. There is no excuse or reason—except a selfish one—for the existence of different "schools" of medicine. The fundamental subjects—nine-tenths of all studies—are the same in all schools. On the subject of treatment, the schools are coming closer together, and the time is near when there will be only one school of medicine, just as now there is only one school of chemistry, one school of engineering, one school of physics, one school of astronomy. And that school will be the school of regular scientific medicine.



The After-Treatment of Hand-Lesions

By RALPH ST. J. PERRY, M. D., Parkers Prairie, Minnesota

EDITORIAL NOTE.—Dr. Perry's exceedingly interesting series of articles, which deal with the common lesions of the hand, with which every general practitioner must be more or less familiar, will be continued in succeeding issues of "Clinical Medicine."

II.

THE filling of deep cavities in a wound may be greatly facilitated and lost finger-tips may be restored by sponge eduction, a so-called sponge grafting, which in reality is merely a method of supplying a framework within which the granulations are induced to grow and spread to a far greater degree than they would without any such encouragement.

Sponge Eduction or Grafting

Transverse sections of fine-grained bleached surgeon's sponge, cut of the right size and shape and about 1-16 of an inch in thickness, are carefully cleansed and sterilized. A piece so prepared is laid in the granulating cavity or over the granulating end of the finger, fastened in place by two crossed strips of plaster, and kept constantly wet with a mixture of equal parts of hydrogen peroxide and saturated solution of boric acid. The patient is instructed to deposit (with a dropper) a few drops on the sponge every ten minutes.

The granulations grow up into the meshes of the sponge, gradually filling the pores, until after a day or two the sponge must be removed gently lest it become firmly imbedded in the growth of granulations. When one piece of sponge is discarded put in another, continuing until a sufficient growth has been secured to remedy the defect.

Case 10.—Merchant. A small scratch on the ball of the thumb became infected and resulted in an ulcer about an inch in diameter and half an inch deep which refused to heal under ordinary treatment and totally disabled the hand.

The granulations, which were weak and unhealthy, were given stimulating treatments of silver nitrate for three or four days and then sponge eduction was resorted to. In addition to the hydrogen-peroxide and boric

acid solution, there was used, once daily, a feeding of bovine, which was allowed to stay on for an hour, when the sections of sponge were changed. Inside of forty-eight hours improvement was noticed and at the end of two weeks the ulcer had all filled in and a healthy scab formed.

Case 11.—Machinist. The tip of the thumb was caught in some cogwheels and the "pulp" mashed and torn away, leaving a wound which if allowed to heal unaided would have effected a result fatal to the specialized function of the hand and been the cause of serious financial loss to the patient, reducing him from a first-class specializing mechanic to an ordinary one. The amount of tissue destroyed reduced the diameter of the thumb-tip fully half an inch.

The wound was trimmed and smoothed up preparatory to a skin grafting, when it was suggested that sponge eduction be tried. Accordingly, the materials were prepared and the eduction initiated before granulations began to form. When they did develop, the spongy framework was there to stimulate and encourage them and to afford a means of support in their growth. In a week the granulations had grown to such an extent that the missing portion of the thumb had been almost entirely restored, while by the tenth day the new growth had been so satisfactory that the eduction process was suspended and unaided healing allowed to take place. Scabbing over followed, and the result was most satisfactory to all.

Bone Grafting

Bone grafting may become necessary or desirable where part of a bone has been destroyed, to restore strength to the carpus or metacarpus, or for functional or cosmetic advantages in the phalanges. The bone cavity is cleansed as thoroughly as possible with saline solution and hydrogen peroxide,

and small pieces of fresh bone from another individual or of decalcified bone are implanted as in skin grafting.

Case 12.—Brakeman. The hand was crushed in making a coupling and during the course of the healing a portion of the middle-finger metacarpal bone became infected and necrosed. The dead portion was cleaned away without unnecessary damage to the periosteum, and preparations were active for a grafting of decalcified bone, when the ambulance brought in another railroad victim whose injuries required amputation of the arm. Inquiry disclosed the fact that the new arrival was free from syphilitic, tuberculous or other taint, so a portion of bone was taken from the amputated hand of this man and grafted immediately into the waiting cavity in our first patient's hand. The wound was dressed in iodoform and closed as securely as possible against extraneous influences.

Contrary to expectations, the graft "took," and the defect in the bone was so effectually closed that in after-years the man declared the hand to be as strong as the sound one.

Case 13.—Militiaman. Accidentally shot through the hand, a Mauser bullet destroying a part of the ring-finger metacarpal. Some curious friends removed the dressings to "examine the wound" and infected it. Several fragments and splinters which were actively engaged as foci for new bone formation were thrown out in the inflammation and discharge which followed. After getting the infection eliminated as much as possible the wound cavity was thoroughly cleansed with normal saline solution and hydrogen peroxide, and a piece of decalcified chicken bone implanted in the place of the discharged bone. To encourage granulations, the parts were fed with the iodoformed bovine mixture already described.

Case 14.—Machinist. Suffered a crushing injury of the thumb in which the metacarpal bone was comminuted. In the cleansing and other manipulations incidental to the first-aid services, the overly zealous first-aiders carefully picked out and threw away the small fragments of the comminuted bone.

To preserve the strength and function of the thumb it was decided to graft a piece of bone into the metacarpal, but when the

stock of supplies was looked over it was found there was no decalcified bone on hand. In this emergency a piece of ivory (cut from a poker chip) which had been used in some decalcification experiments, and which was sterile, was used as a graft. The surrounding tissues took kindly to the reformed sporting element and in due course of time the graft became enclosed and incorporated in the new bone growth, a satisfactory result being secured.

Silver-Wire Bridges

Silver-wire grafts have been used to help bridge over defects in bone continuity and as a support for weak union. A piece of sufficiently heavy and rigid silver wire is selected, half an inch longer than the defect, and bent into a shape corresponding to that of the missing portion of bone, as to curves or angles. In the opposing ends or surfaces of the bone are drilled holes, and into these the ends of the wire are forced and left there. The silver is innocuous and nonabsorbable and forms a serviceable nucleus around which a callus or new bone growth centers.

Case 15.—A Vey warrior, West Africa. Was shot in the hand with a slug of iron (from a pot) and about half an inch of the middle-finger metacarpal bone was eliminated in the transit of the slug. Shreds of periosteum which remain in the wound gave hopes of regeneration of bone-tissue, and in order to preserve the length of the bone, its curve, and so on, a silver-wire graft 1-8 of an inch in thickness was inserted, and around this sufficient bone-tissue eventually formed to restore the strength of the bone as a whole. After placing the silver graft in place, the soft parts were patched up the best possible, special efforts being made to secure a closure of the palmar wound with the least possible amount of cicatricial tissue. The entire wound was then dusted freely with iodoform, too freely, in fact, for on the third day the patient showed signs of iodoform poisoning. The dressings were then changed to Peru balsam, a little iodoform and oakum immediately covering the wound. The toxic symptoms disappeared, and eventually a good result was secured.

Wax Filling for Necrosed Bones

"Bone-wax" is often used as a filling in order to encourage bone granulations in tuberculous and other necroses. The wax is prepared after various formulas, e. g.:

1. Von Mosetig-Moerhaf bone-filling:

Iodoform	parts 15
Spermaceti	" 10
Oil of sesami	" 10

Melt the oil and wax together in a sterile bottle and let boil for fifteen minutes over a water-bath. Incorporate the iodoform while the fats are boiling, remove from the fire, stirring constantly until cool. For use, heat the mass to 120° F. in a thermostat or water-bath.

2. Horsley's bone-wax:

Salicylic acid	part 1
Oil of almond	" 1
Beeswax	" 7

Melt over a water-bath, boil for ten minutes, then allow to cool under constant agitation. For use, heat to 120° F. in a thermostat or water-bath.

In using either of these bone-fillings, the cavity operated upon should be cleansed as for grafting, then mopped or swabbed out with 95-percent carbolic acid followed immediately by pure alcohol, mopped dry, and then the melted filling poured into place.

Case 16.—Farmer. Suffered a bruise on the dorsum of the hand which was severe enough to involve the ring-finger metacarpal bone and afford a focus for a tuberculous invasion. When seen by the surgeon, after several weeks of home maltreatment, there was such a considerable loss of tissue that fully half of the bone was missing.

The external parts were cleansed, a sufficiently large incision was made over the length of the bone at the site of the disease, the periosteum reflected and the necrosed and diseased bone removed with curet and gouges. The cavity was cleansed with saline solution, iodized gasolin, and again with the salt solution, then mopped out with 95-percent carbolic acid followed immediately by alcohol, after which it was mopped dry and filled barely full with liquefied Horsley's bone-wax. (In cooling, the wax presents a concave surface, which is shaped up with a scalpel.) The periosteum was laid in place over the wax and the overlying soft

parts were drawn together and sutured. Part of the wax reappeared a few weeks later and was cut away externally, part of it evidently having been absorbed or encysted in the new growth of bone instead of being pushed out of the cavity.

Case 17.—Farmer. Following a slight injury to the thumb, there developed a tuberculosis of the metacarpal bone of that member. The nature of the lesion was not recognized at first and so was treated as a felon and an ordinary abscess. An exploration with a probe, in the course of treatment, revealed the loss of a considerable quantity of bone, and then a history of tuberculosis definitely settled the future line of treatment.

An incision was made over the diseased part, all infected bone removed, and the cavity cleansed and prepared as described in Case 15, after which the cavity was filled with Von Mosetig-Moerhof's bone-filling and the soft parts replaced and sutured. The external wounds healed in a few days. Nothing further was ever seen or heard of the wax-filling, the entire mass evidently being encysted or appropriated by the new tissue instead of being thrown out by new-growth pressure.

Bismuth-Vaseline Bone Injection

Some months ago it was discovered that a mixture of bismuth subnitrate and vaseline when injected into the cavity of a tuberculous bone or other necrotic bone disease has a peculiar curative effect, many cases which had resisted other measures promptly healing under this treatment. The formula used for injection is one part of the bismuth to two parts of fluid (not melted) vaseline. [The author, presumably, refers to the "liquid petrolatum" of the Pharmacopeia, commonly known as vaseline oil. The combination itself evidently is an adaptation of the *bismuth-vaseline paste* introduced by Dr. Emil G. Beck, of Chicago, for injecting fistulous tracts, tuberculous sinuses and abscess cavities, and found extremely useful, by Dr. J. R. Pennington (CLINICAL MEDICINE, 1909, p. 45) for healing rectal fistulas. For this paste ordinary petrolatum, of various degrees of firmness, is used.—ED.]

Case 18.—Printer. Had his hand pinched in a job-press which he was feeding. The

soft parts were bruised, the skin was lacerated, and a fracture of the os magnum was suspected, this suspicion later being rendered almost certain by the development of a necrosis. No tuberculous history could be elicited.

The necrotic cavity was washed clean of pus, dried thoroughly, and then injected with the foregoing bismuth-vaseline paste,

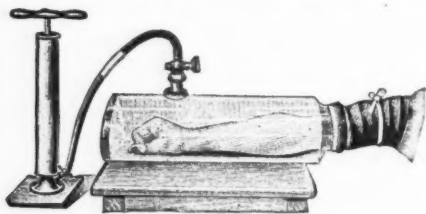


Fig. 19 Vacuum Apparatus

an ordinary urethral syringe serving for the purpose. During the ensuing week portions of the paste were thrown out, and when a second injection was made on the tenth day, it was noticed that the cavity had materially decreased in capacity. In a few days after the second injection all discharge ceased, the outlet closed and scabbed over, and the bone apparently healed over. The patient reverted to the care of his family physician, who subsequently reported the cure as permanent.

Drainage of Wounds

In all wounds of a cavernous nature which are left to heal by granulation there must be provided ample means of drainage. In a comparatively flat-surfaced wound the absorbent dressings afford sufficient capillary drainage to keep the same clean, but where cavities, tunnels and undermined edges exist, a drain must be afforded which will keep free and open. Usually a few strands of silkworm gut or a small bunch of horse hairs will suffice, they being removed one or two at a time as the healing progresses and the need for them decreases. In some instances, where there is much discharge or where muscular contraction tends to diminish and close the outlet for the discharge, it is advisable to resort to a rubber tube. Never forget that a drain of any character is a foreign body and should be employed no longer than absolutely necessary.

Passive Motion, Massage, Vibration

Passive motion should be instituted very early in all injuries where there is a prolonged disability; it prevents agglutination of the soft parts and ankylosis in the joints, stimulates the circulation and helps to cleanse the wound. In ordinary injuries, where there are no tendons or nerves sutured and in palmar abscess and other phlegmonous conditions, gentle movements are begun about the third day; in fractures, joint injuries and tendon-cases they are begun at the end of the first week, often much earlier if local conditions so warrant. These movements at first need be only enough to insure freedom of the parts and should be very gently, slowly and guardedly carried on; as the case progresses to recovery they can be increased in degree until by the time the patient is discharged all motion possible has been restored to the parts.

Massage is a most useful measure to employ in many cases where the circulation in the parts is sluggish, where small adhesions have formed, and as an adjunct to passive motion. Because of the closely underlying bony structures of the hand, only the gentler methods can be employed lest the injury be aggravated. The forms used are stroking, friction, kneading and percussion. In giving a massage treatment, the applications are first made to the distal parts and gradually extended upward as far as necessary or desirable.

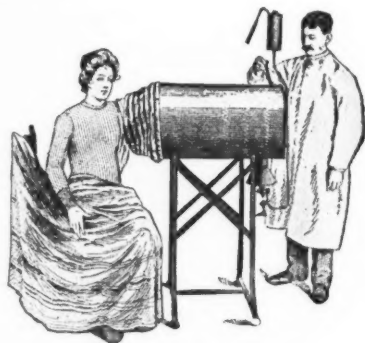


Fig. 20. Hot-air Apparatus

Vibratory treatments are merely a form of mechanical massage in which percussions of varying force and speed are delivered.

Vacuum and Hot-Air Treatment

Vacuum treatments are a method of inducing an artificial hyperemia of the parts by enclosing them in an air-tight container (Fig. 19) and then extracting a portion of the air by means of an air-pump, thus creating a partial vacuum. This form of treatment, which has been in use for many years, has recently been studied and perfected or improved by Bier, of Bonn, who has successfully applied it in cases of tuberculosis, arthritis, various wound infections, chronic stiff joints, neuralgias, and similar troubles.

The hot-air bath (Fig. 20) is another method of inducing hyperemia, and is used in the same class of affections as is the vacuum apparatus. It may be said that these two pieces of paraphernalia will be found extremely useful, not only in acute cases, but in those chronic stiff joints which come to you after years of neglect and mistreatment.

Management of the Final Stages

The leaving off of dressings is a matter which is frequently perplexing. As a rule it is safe to persist in using a dressing as long as there exist any of the indications which originally demanded its use. Dan-

gers from infection weather exposure, motion, additional traumatism or meddling are sufficient reasons for maintaining the dressings, regardless of the apparent well-doing of the injury. The surgeon may remove them temporarily for purposes of treatment, but should never allow premanent removal prematurely. At the same time, the necessities of the patient should be borne in mind, and just as soon as compatible with safety to the injured parts he should be allowed to resume his occupation. Do not let the urgings of the patient, employer, lawyer or insurance agent mislead you.

When a wound has entirely healed, after prolonged treatment, the skin usually is soft and tender, all callosities having been removed, and the patient often complains that the hand is too tender to use at his occupation. To overcome this form of disability expeditiously, the hand may be rubbed with a weak solution of alum, or with a 5-percent solution of formaldehyde. If the patient finds it necessary to resume hard manual labor immediately upon recovery, he should wear as a temporary protection a glove from which have been cut away those portions not needed for the covering of the tender parts.

MEN of decision all meet with derision. Cromwell's is still a name of opprobrium; Disraeli was despised by millions; even Lincoln was reviled by his antagonists. Weaklings neither wear nor weave the crown of thorns. Can't you see how absolutely impossible it is to be clear-visioned and upright and uncompromising and true to the highest dictates of duty, citizenship and conscience, without arousing a hubbub from every man who detects *his* fall in *your* rise? Nobody wastes the time to hate a nobody.—Herbert Kaufman.

The Doom of Therapeutic Nihilism

The Impending Revolution in Treatment

By GEORGE L. SERVOSS, M. D., Fairview, Nevada

FOR several years, and up to a very short time ago, many of the recognized authorities have preached against the use of drugs, to any very considerable extent, in the treatment of disease, and many of the textbooks dealing with the principles and practice of medicine have devoted *pages* to pathology and diagnosis, and *lines* to therapy. The majority of the teachers have followed the precepts of the writers accepted as authorities and have given very little attention to treatment. Much time has been devoted to laboratory work, and drugs have been tried out on healthy persons and animals, and many of them, through experiments of this sort, have been pronounced worthless or possessed of very little therapeutic activity.

Bedside Experience Better Than Laboratory Experiment

In spite of obstacles of this sort, there have been a few men who have not lost their faith in drugs and their application for the relief of diseased conditions, and these men have made their experiments at the bedside, applying their remedies to the sick, and, in many instances, drugs which have been pronounced worthless through laboratory experiment upon the healthy have been found to be remedially active when applied to pathologic conditions.

For a number of years, these men have been held up to ridicule by those *soi disant* authorities who insisted that drugs were practically worthless, but they have pursued their own investigations in a quiet way and have demonstrated that, when drugs are applied properly and according to known effect, anticipated results have followed. These same men, many of whom are not located in the metropolitan centers or connected with medical schools, have, from time to time, published reports of their findings; and following such reports, other doctors have made like applications of the drugs in question, with like results, thus demon-

strating that such drugs have not been found wanting by those who understood them and knew how to apply them.

Many of the men who have pronounced drugs worthless have been, and are now doing, consultation practice exclusively, and because of the fact that they have seen their patients, or rather the patients of others, but once or twice, they have not been in a position to follow up the action of the applied remedies as have those who observe their cases from start to finish. Consequently, such men do not see and do not know drug-action, and are forced to accept the decision of others regarding the same. Many of the laboratory experimenters are not doctors of medicine and consequently have had no clinical experience, and their experiments are based upon set rules, as applied to animals or persons in health, and their findings are not based upon the action of drugs in sickness.

Lack of Acquaintance with Drugs Cause of Success of Proprietaries

Owing to the fact that drugs have been used to such a limited extent during the past two decades, pharmacology has been neglected to a very considerable extent in our medical schools, and men have been turned out of college with a good understanding of pathology and diagnosis but with little idea of the treatment to be applied to give relief in such pathologic conditions, the conclusion having been reached that the majority of acute diseases were self-limited and that any treatment would be of but slight avail. During this time the doctor has been a diagnostician and pathologist, but has done very little in the way of relieving his patients.

Such a course has given the manufacturer of proprietary medicines an opportunity to educate the masses in the use of such agents, the consequence being that we now are a nation of drug-takers who employ such agents without due regard to the real conditions, and they are doing more harm than

good; but these drugs are being used for the reason that the people want, and will have, treatment, in spite of all that the authorities may say or do to the contrary.

Following up the findings of those men (other than the recognized "authorities") who have found drugs not wanting, a revolution is taking place in the matter of applied therapeutics. The medical student today will not accept a textbook which does not devote some space, other than a few lines, to the *treatment* of disease, and the same is true of the thinking doctor. Both want to know *what to do* when certain conditions are encountered. They do not want a set line of treatment laid down in every case, as it is now recognized that the conditions rather than the named disease are to be treated—the name signifying but little.

Why Symptoms Count

It is often said that symptoms should not be treated. If not, why not? Symptoms are simply the signs of certain conditions, either normal or abnormal, and it is these conditions with which the doctor comes in contact, and not the disease-name. One may encounter one case of pneumonia with extremely high temperature, accompanied by delirium, while the reverse may be true in his next case. Does the same treatment apply to both alike? I think not, in fact, I am absolutely certain that it does not. One case may be sthenic and another asthenic, and it is certain that the same treatment would not be applicable to both. It is clear, then, that the symptoms must be taken into consideration in every individual case.

Individual peculiarities also are to be considered, especially in adapting the dose of the drug employed. One could hardly employ the same dosage in the slight, emaciated woman as he would for the heavy, robust man. Nor would one employ drugs in like manner in treatment of the young and the aged as would be followed with the middle-aged person. All of these, and many more, facts are to be taken into consideration in the rational application of drugs.

Dosage an Important Question

Dosage is another important question in the application of drugs. Our forefathers in medicine were of the opinion that large

doses of calomel were absolutely necessary, but in recent years it has been found that very small doses of this drug give far better results. Certain of the authorities have cited "average" doses of given drugs, but in actual practice it has been found that the dosage must be either larger or smaller than set down, in order that the anticipated results may be obtained.

In an editorial in *The Journal of the American Medical Association* for August 27, 1910, it is pointed out that, although the dosage of atropine given by the authorities is up to 1-60 grain, such dosage may be followed by toxic symptoms, and that clinical experience has shown that dosage as low as 1-1200 grain not infrequently yields better results. The authorities mention the dosage of glonoin as from 1-500 to 1-100 grain, but it has been shown clinically that even smaller doses produce as good, if not better, results in many instances. Consequently, as this editorial states, "both pathology and pharmacology teach that in many instances this difference in reaction of a given organism, when not associated with actual destructive changes, is a mere matter of variation in irritability. The problem of treatment, then, becomes a matter of dosage."

The editor of *The Journal* accepts the fact that drugs are employed again more and more in the treatment of diseases, and in the course of his remarks says that the use of the drugs is based upon physiologic analysis of the condition under observation, as applied to functional disturbances. To quote once more from this editorial:

Rational Therapeutics

"The treatment of a condition by the careful physiologic analysis of the functional disturbances involved, combined with the application of the drug based upon knowledge of its action, is shown as follows: A case of angina pectoris vasomotoria: heart symptoms, pressure in the chest, a feeling of intense fear appearing on exposure to cold. The physiologic analysis makes the following chain of events likely: Cold causes peripheral vasoconstriction; this leads to increased blood pressure, which exerts a stimulus on the depressor nerve, which in turn stimulates the vagus center and thus

leads to head symptoms. The whole or part of this chain is probably in a condition of increased irritability, as normally such a result would not be observed. Instead of decreasing the irritability of the factor involved, however, it is necessary only to interrupt the chain by the administration of atropine, which paralyzes the vagus ending in the heart. The patient can now dip his hands into ice water without any feeling of distress, which, however, comes on again when the effect of the atropine wears off."

What is here said is one of the arguments which have been made right along by those who have been taking all such conditions into consideration, and through such recognition of the conditions have been able to apply drugs rationally. The editor might have gone a step further in his description of the action of atropine and shown that dilatation of the peripheral blood-vessels also overcomes the disposition to fear of cold, and that by so relieving the blood pressure internally gives relief in angina.

The Pharmacologist Must Not Over-Shadow the Clinician

In concluding his remarks, the editor says: "The close affiliation of the clinician and the pharmacologist here outlined, besides being of practical use to the former, must of necessity be a great stimulus to the latter, providing he does not permit the urgency of the immediate solution of clinical problems on the basis of insufficient knowledge to influence unduly the direction of his investigations." This is very true, in more ways than one, as we not infrequently see reports, based upon very meagre findings clinically, regarding the use of drugs, and if the laboratory experimenter is not careful, or if he becomes too enthusiastic, his findings may likewise be of little value.

On the other hand, the editor might have gone a step further and brought out the fact that not infrequently laboratory experiments might be faulty as regards the action of drugs in disease. It is a self-evident fact that so much attention has been paid to laboratory reports and so comparatively little to those of a clinical nature that it becomes a hard matter for many to give

due credit to clinical findings, unless such findings are corroborated by those of the laboratory. The editor named, who quotes Loewi, admits that the clinician frequently fails of obtaining results similar to those of the laboratorist, and that such failure is based upon the difference in action of the drug in the normal and diseased organism.

This very same argument has been advanced by the clinician who has applied certain drugs in disease and gotten results in spite of the fact that such agents have been pronounced worthless by the pharmacologist. For a time such arguments were ridiculed and disagreed with, even by the writer of the editorial above quoted, but time and experience have demonstrated that, in the majority of instances, the clinicians have been right.

Within a very short time the editor of *The Journal of the American Medical Association* has allowed the publication of certain articles regarding drugs and their applications which, in tone, have been absolutely contrary to the arguments brought forth in the editorial in question, and which may have misled many of the readers of *The Journal*.

A "Journal" Writer's Ignorance of Drug-Action

One writer in particular, Barton, in a paper on "Pharmacologic Fetishisms," disagreed with the clinical findings of hundreds of doctors, not only in this country, but abroad. Barton said that for some time he employed aconite in the treatment of neuralgia, but that this drug could have no antineuralgic effect. By such remark he showed conclusively that he knew little, if anything, of the physiologic action of this drug, applied clinically. In neuralgia we invariably have a localized congestion at the seat of the pain, and by the administration of aconite, in one form or another, we obtain vascular dilatation, with equalization of the circulation, and it does seem to me that the use of this drug in this connection would be extremely rational.

Barton further says that veratrum viride is worthless in puerperal eclampsia—and that in the face of hundreds of reports to the contrary. In cases of this sort we have an accumulation of toxins with which to con

tend, and it is a known fact that veratrum increases elimination, and by so doing assists in the carrying off of waste material. Again does that writer show his lack of knowledge of physiologic action of the drug in question. Dr. Barton is not the only man who does not take into consideration physiologic action, and it is little wonder that he, like others of his class, has so little faith in drugs in the treatment of disease.

The Coming Revolution in Treatment

The time is coming, and that within a very short time, when the physician, to be successful, will be obliged to study his drugs as he does his pathology and diagnosis, if he desires success to follow his efforts. This is only a beginning of the revolution which is to take place in the question of treatment. It is very probable that this reaction will bring about a condition markedly different from the one which has been pursued for several years past, with a renewed interest in the application of drugs. With such renewal of interest, it is very

probable that some will go to extremes, and that many agents will be employed radically, and without the proper attention to, or knowledge of, the physiologic action, based upon cause and effect.

In consequence, it stands the doctor well in hand to study his agents carefully, both as to their pharmacology and their clinical application. If such a course is pursued, it is very probable that drugs will be given the position to which they are entitled, and that therapeutic nihilism will pass into history, never to be revived.

There is a demand from the patient for treatment of a curative character, and unless the doctor fulfils this demand, he need not anticipate success. But he should adopt his treatment with care, taking into consideration all of the conditions, and symptoms attendant thereto, and apply only such remedies as he knows will correct such conditions. He should study not only pathology and diagnosis, but every phase of action of drugs as applied to conditions other than normal, as well as the normal.

Acute Anterior Poliomyelitis in America

*New Data Concerning Diagnosis and Etiology, and Considerations
Regarding Treatment*

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THIS is not yet the time to collate all the observations made upon the epidemic of acute anteriopoliomyelitis which has been spreading from Massachusetts since 1904. But any new fact must be of value in our endeavors to cope with this grave disease, which is far more prevalent than is yet supposed. This year at least a thousand cases have occurred in Pennsylvania. In the District of Columbia, the committee appointed to study the outbreak there knows of more than five hundred cases. Altogether more than eight thousand cases have already occurred; and well over five thousand of these were in the United States.

To the practitioner, perhaps the most practically interesting question is the early

diagnosis and the differentiation of this condition from other febrile diseases.

Like most zymotic affections, this so-called infantile paralysis is most common in childhood, and it is exceedingly difficult to diagnose before paralysis has declared itself. But as the prognosis regarding full recovery of paralyzed muscles is not favorable, it would be well were we able to diagnose the disease before its invasion has reached the anterior horn and destroyed the cells there or impeded their function sufficiently to cause paralysis. Were we able to ensure recognition thus early, we should be in better position to estimate the utility of some of the therapeutic measures which have been declared serviceable; for, as a rule, the disease sub-

sides naturally very soon after paralysis has occurred.

The Prodromal Symptoms

In the Washington epidemic, apathy and great weakness in some cases preceded the attack for days. Irritability, perhaps with photophobia, may follow or occur independently. Coryza has been marked in some cases, generally severe ones, and has then extended throughout the period of invasion; but is not usually a marked symptom. Intestinal trouble appears to have little significance, in view of the fact that epidemics usually occur in summer when diarrhea prevails, and comparatively in few of the cases is there disturbance in the prodromal period. A significant symptom is insomnia unaccompanied by restlessness, fever or intestinal intoxication. When weakness supervenes and is followed by restlessness, poliomyelitis may be strongly suspected. If Kernig's sign occurs, especially if unilateral, or the deep reflexes diminish, the diagnosis is almost certain if one can exclude other diseases which cause meningitis. When there is profuse perspiration, without a high fever, presumption is stronger and for practical purposes the diagnosis may be made.

Attack May Be Meningeal

Of course, until paralysis is manifest, epidemic cerebro-spinal meningitis (*diplococcus intracellularis*) cannot be excluded; and it is also possible that a tuberculous meningitis may be brooding. But this question is easily decided by lumbar puncture of the meninges; and this should be done rather than lose valuable time waiting for other symptoms.

Properly performed, puncture is a perfectly harmless procedure, and is much less painful than is the injection of antitoxin, for example. It immediately shows us the turbid fluid caused by the *diplococcus* and guides us to call urgently for serum-treatment, if we find that disease. In poliomyelitis also the fluid contains an increased amount of cells and albumen; however, they cannot be seen with the naked eye, for the fluid is clear, but upon precipitation, characteristic cytologic changes are found.

The conclusions of Drs. Hough and Lefora who studied in behalf of the Washington

Committee, eleven cases of poliomyelitis anterior epidemica, are as follows:

1. The cerebrospinal fluid in acute anterior poliomyelitis is generally clear; there is in the early stages of the disease an increase of pressure, although this is not generally pronounced, and there is usually an increase of the protein-content sufficient to give a positive Nonne-Apelt and Noguchi butyric-acid reaction.

2. In the earlier stages of the disease there is more or less pleocytosis in the spinal fluid. There are many polymorphonuclear leukocytes, which are probably dependent upon the reaction of the meninges to the penetration of the virus into the central nervous system.

3. The increase of polymorphonuclears disappears a few days after the acute onset of the disease and is substituted by a lymphocytosis, with some plasma-cells and sometimes a few mast-cells.

4. The disappearance of the polymorphonuclears is brought about through the rapid and vigorous phagocytic activity of the macrophages which sometimes contain twenty or more of the polynuclear elements.

5. These degenerated polymorphonuclear leukocytes show in the framework of the macrophages very different degrees of histochemical changes (pyrominophile and fuchsinophile reaction), which are indications of rapid processes of digestion, and acquire sometimes strange forms which resemble different bodies described in some protozoan diseases. (Leishman-Donovan bodies in kala-azar, Mott bodies in blood of ox with Yinga trypanosomiasis.)

6. The presence of the altered red blood-cells in the spinal fluid is probably dependent upon capillary hemorrhages in the spinal cord, which is a consequence of the selective preference of the disease for the spinal vessels.

7. Koernchenzellen, altered lymphocytes and other mononuclear elements are commonly present in the fluid after this period.

8. In our histological study of the spinal fluid in the disease, we did not observe any stained bacteria.

9. The similarity of the histopathology of the spinal fluid in poliomyelitis to that of the fluid in some protozoan diseases affecting the

nervous system is argument in favor of the protozoan nature of the virus in poliomyelitis, even though some other investigators claim the disease to be produced by a very small organism.

Differential Diagnosis From Rheumatism

The error of confounding this disease with rheumatism has been possible because of the severe pain and great tenderness which occur when the meninges are much inflamed. The distinction, however, is quite easy; for in acute rheumatism the joints themselves are inflamed, and hence, are hot, red and swollen; whereas, in poliomyelitis there is no special heat, redness or swelling of the joints or limbs. Besides, there is always a modification of the reflexes in poliomyelitis; and as soon as the horn-cells of any segment are invaded, the reflex arising in that segment is first diminished and later suppressed, often several hours before paralysis occurs. When the attack is mainly on the pyramidal fibers, either in the affected segment or higher up in the cord, the reflexes may be exaggerated in that part of the body supplied by those fibers. Again, before the meningeal inflammation has extended to the cord, there may be, for a time, an exaggeration of reflex activity in general—meningismus.

The Fastigium Poliomyelitis

The fastigium occurs on the second day, when the temperature may vary from 99 to 105 degrees. A little over 100° F. is the commonest. At this time the face is often greatly flushed. Rigidity of the neck and back may be severe; hyperesthesia and even pain may be complained of; and there may be headache, vomiting, retention of urine and feces.

Lysis is usually complete about the fourth day, and is preceded by paralysis. In those cases where the patients are not paralyzed they often remain rigid for some days, walking awkwardly.

Tremor, sometimes unilateral, may be more striking than stiffness or paralysis. It is due to involvement of the rubrospinal fibers, as they pass through the brain stem or cord, where they are situated in proximity to the anterior horn.

In the early stages, hyperesthesia is the feature; but when invasion is extensive,

hypesthesia may later occur on account of the involvement of the sensory tracts in the lateral columns which convey the impulses of heat, cold and pain. When inflammation of the meninges extends to the cul-de-sacs surrounding spinal roots, stabbing pains, similar to those of *tabes dorsalis*, occur. These are paroxysmal, recurring at various intervals and lasting from a few seconds to a few minutes. But paresthesia may occur due to exudates in the spinal cord pressing upon the tracts there. These are not intermittent like the root pains; but may vary in intensity at different times.

Differential Diagnosis

Poliomyelitis may be mistaken for typhoid fever, which, however, should be excluded in most cases, by the presence of meningeal irritation. Grip of the nervous form may simulate poliomyelitis; but it rarely shows so pronounced a meningeal reaction or the irritability of the lower neurons. Moreover, the cases associated with catarrhal symptoms are usually so severe as to be easily differentiated from influenza.

Intoxication from the intestine gives rise to a stuporous condition which may cause fear of a severe poliomyelitis; however, the foul-smelling stools and the immediate relief afforded by flushing of the bowels should exclude poliomyelitis, especially if there is no retention of urine or meningeal irritation.

Pathology of Anterior Poliomyelitis

The disease is not a primary atrophy of the anterior horn-cells from acute toxemia. It is a constitutional disease due to a living virus which causes an inflammation of the connective tissues of various organs, including the lymph-glands and intestinal follicles. It is accompanied, too, by congestion of the spleen and of the mucous membranes.

The meninges are inflamed, and the whole central nervous system is more or less hyperemic. The destruction, however, vastly preponderates in the region of distribution of the anterior spinal arteries which supply the anterior cornu, the injury to the motor cells in which produces the paralysis.

Those cells around which the inflammation is not so severe as to produce more than edema quickly recover as the invasion ceases;

this accounting for the rapid return of power in some of the cases. Other cases where return of power is less rapid are accounted for by the reintegration of a destroyed axone, the pyramidal cells of which have escaped necrosis. In yet other cases it is the fibers of the pyramidal tract, as they approach nearer to the cells in the cornua, which are mainly involved, while the cells themselves in part escape. Such a case is characterized by exaggerated reflexes, and sometimes by Babinski's toe-sign.

Still another set of fibers may receive the chief impact; I refer to the cerebrospinal fibers, which also pass to the anterior cornua cells, through which they regulate muscular tonus. The loss of their influence leads to hypotonia and tremor, without paralysis so long as the pyramidal cells themselves are not implicated.

Of course, the clinical picture may vary in different parts of the body in accordance with the differing incidence of the inflammatory exudate upon different segments of the cerebrospinal axis; and in the same segment some cells may escape where others are attacked.

Etiology of the Disease

The salivary gland has been used by Levaditi to convey the disease from one monkey to another. In the Rockefeller Laboratory they have conveyed the virus by spraying into the nares an emulsion of nasal mucous membrane from a diseased animal. The most infectious material, however, is the spinal cord. The cerebrospinal fluid, however, is infective only for a few days.

Carriers of the Infection

It is believed that the disease may be conveyed by the medium of a healthy carrier. (Nebraska epidemic, Dr. C. A. Anderson; Ohio outbreak, Dr. Frost, U. S. M. H. and P. H. Service.) Some hold very strongly that abortive undiagnosed cases are responsible for the spreading of the disease so widely. If this is the case, isolation of ascertained cases must be of little avail, especially as there are other facts which seem to point to the superfluity of isolation *as at present conceived* against this disease. An instance will make this clear.

A child eleven years of age was attacked with acute paralysis at Bethesda, Md., last

summer. She had been playing outdoors all day long for weeks with seventeen younger children, seven of whom were her own brothers and sisters. All of these were under careful observation by Dr. John Lewis, the health officer of the district, with whom I later saw the patient. Not one of these children developed any sickness which would in the least point to poliomyelitis. No contact with another case could be traced, and none of the children had been to town for some weeks. It was the first case recognized at the time in the neighborhood.

Again, in the Washington Children's Hospital, some twenty-five cases of poliomyelitis were admitted last summer, many of these being in the acute stage. They were placed in the common ward and at first no special precautions against infection were adopted. No patient in the hospital contracted the disease at that time. Latterly, spraying the nares was employed and a certain isolation was maintained, in spite of which however, I understand, one case of poliomyelitis developed later in another child soon after it had left the hospital.

I need not instance further, for the number of examples where intimate contact has not led to contagion is legion.

Evidence That the Disease is Conveyed by Direct Contagion

On the other hand, instances where known single contact has led to the disease are not lacking. The Stormsburg (Nebraska) outbreak is the most striking example; another instance has recently occurred and was observed by myself during our study of the Washington epidemic.

At McKendree, Maryland, in the practice of Dr. A. H. Perrie, the child of a railroad brakeman became febrile and paralyzed on August 1. Fourteen days before, she had visited Chesapeake Beach, to which many Washington people resort. Nine days later this child's cousin was attacked. The contact consisted of a visit to a church fair, where the children were together some hours.

In the meantime the doctor's own daughter about August 8, was attacked by the disease; and later still another family which had been in contact had one child paralyzed. In the

Washington report will appear the full history of the epidemic.

It is manifest from facts of this nature that either (1) the number of immunes to this disease is very great; (2) that certain bodily states render infection possible; or (3) that the manner of conveyance is very different from that against which precautions are ordinarily being taken by those who advocate isolation.

Proper Isolation: What Should it Be?

Proper isolation, I should say, would consist in closing the avenue of infection, and, inasmuch as we do not yet know the nature of that, only complete isolation from everything can possibly safeguard the unaffected.

It is possible that the disease is really conveyed by an insect, either as carrier or as intermediate host. No one can forget the complete failure of quarantine to prevent the spread of yellow-fever until the false belief that it was carried by fomites was supplanted by the knowledge of its conveyance by the mosquito, the *stegomyia fasciata*. Another instance is the very simple conveyance of Texas cattle-fever by the *boophilus bovis* tick under conditions formerly thought so extraordinary.

The Treatment in the Acute Stage

The medical attendant is confronted by three distinct indications, the first of which is to preserve life and prevent paralysis; the second, to relieve pain; and the third to remove residual paralysis.

I. As to the first indication—preserving life and preventing paralysis—we have as yet no certain means of accomplishing these objects; and the students of immunity are not hopeful of perfecting a serum either to arrest the disease or to prevent its inception. Hexamethylenamin has completely failed to arrest the inflammation in the cord and meninges, although it was thoroughly tested in the Washington epidemic last year.

However, there is a remedy of which we may hope that further early trial will show the value. I refer to mercury, the power of which over some infections has become better realized since it has been employed by injection into the muscles or veins.

However, I have had opportunity to test injection of mercury in but a single case of

poliomyelitis during the acute phase. It was done because of a sudden advance of acute ascending paralysis in an adult who had apparently improved on the preceding day, the fifth of his disease. Also, by lumbar puncture 10 Cc. of cerebrospinal fluid was withdrawn. Headache and nausea were at once relieved and the paralysis ceased to progress, while the temperature fell steadily. During three consecutive days, five doses of mercury bichloride were given, 1-3 and 1-4 grain alternately.

In another case of the same kind, with which I was associated, the remedy was not tried, and the disease progressed to respiratory paralysis and death on the fifth day. Both these patients were adults, seen in consultation, the first with Dr. John Lewis of Bethesda, Md., the second with Drs. A. B. Hooe and Roy of Washington.

It is true that the injections of mercury would greatly perturb a child which is hyperexcitable from meningitis; but a temporary disturbance is preferable to paralysis or death, while much less pain is produced by the small needle required than when diphtheria or meningococcus disease are in question.

If the disease is protozoal, the rationale of mercury medication is evident; and it is possible, too, that some arsenical derivative may be applicable.

Many have recommended cupping and other derivative methods to prevent spinal hyperemia. The rationale of this is at least doubtful when we remember that the hyperemia is nature's defense against further invasion.

Special indications requiring attention are the constipation and retention of urine, which should be met by copious enemata; not by drugs designed to stimulate peristalsis, which is deficient—not because of local toxins, but because of interference with innervation at the center. Sometimes a catheter is required, but usually a flow from the bladder will follow a third or fourth enema, the first, indeed, often failing to expel any feces.

Pain and Irritability

II. The second indication is to minimize the pain and irritability of the attack and to secure rest and sleep.

For the purposes named, the warm bath or wet-pack is most efficacious in some cases. It not only acts as a revulsive to soothe the nervous system and tranquilize the circulation by its warmth, but it has the mechanical function of supporting the limbs so evenly that there is no drag to stimulate afferent nerve impulses to add to the irritation due to the meningomyelitis.

Other measures which secure the same end are the water- or air-bed; maintenance of the limbs in a semiflexed posture by soft pads, and support of the feet by a firm one. Support of the back by a firm cushion, well warmed and not too hard, gives great relief, while the proper adjustment of the pillow under the neck is of much importance. An ice-cap sometimes causes considerable distress, and its use has no justification except the thoughtless routine of orthodoxy. An immobilizing jacket has been of great service in giving comfort to some little patients. It should be used always during the acute phase when pain is severe.

Galvanism is Useful

Finally, after the inflammation has subsided, usually in about a week, galvanism should be employed as a direct means of diminishing the pain, which is derived from the stretching and sagging of joints, ligaments and muscles caused by the loss of tonus in the muscle groups paralyzed, sometimes aggravated by hypertonus of antagonists not paralyzed. The relief given in this way is surprising to those who have not tried it.

To illustrate: One adult patient, seen with Dr. Ammerman of Washington, would gain a tranquil repose of over two hours after half an hour's application of galvanism to his paralyzed muscles. At other times restlessness and pain were so great that only by morphine could any sleep at all be secured, and his day was a perpetual misery. The hot bath was unavailable at that time.

Treatment of Residual Paralysis

III. Little children are reluctant to essay movements of a partially disabled limb. When it is an arm, they let it hang and use the other; if it is a leg, they make no effort, preferring to be nursed and waited upon.

Suspension in water greatly facilitates movement when the muscles are feeble. We

in Washington can fully confirm the experience of the New York Committee, which found out how easily a child in a bath could accomplish little movements which it was unable to attempt, even, when its limb was not so supported; and it is very easy for the mother or nurse to invent little play-games to maintain the child's interest for an hour at a time while suspended in a warm bath. There is no danger in this so long as the water is maintained near blood-heat. The skin does not macerate and the effect upon nutrition is most favorable. To stimulate the circulation in the limbs they should be gently massaged several times a day.

Galvanism for Residual Paralysis

But from this hydropathic procedure one must not expect to procure regeneration of atrophied muscle or nerve. Surgeons know well that the muscles supplied by a cut nerve will atrophy and will not regenerate although they may be massaged till the end of life.

If, on the other hand, these severed nerves are galvanized from the beginning, atrophy will not occur, for the exercise of their contractile functions maintains the integrity of the muscle-elements; and it is only galvanism which can excite contractility when the motor nerve and its endings have degenerated. If treated by galvanism from the beginning, a living muscle-cell will greet each regenerated nerve-fiber which pushes to its destination. If galvanism is not used, the envelopes of only dead muscle-spindles will be encountered. The time for these to regrow, must, then, be added to the duration of every case not treated by galvanism.

It is necessary to restate these simple physiological facts on account of the vogue of the pernicious statement that no treatment of poliomyelitis should begin until four months have elapsed. This doctrine is another instance of unthinking orthodoxy. But if the elementary physiological considerations just presented make no appeal, I need only cite the high authority of Erb, Bergonie, Zimmern, and Zappert, the latter the distinguished Viennese pediatrician (added to that of Duchenne's final experience) who makes a practice of galvanizing the paralyzed muscles just as soon as the active symptoms subside.

The galvanic current should be applied only to those muscles which are paralyzed; and the negative pole should be placed over the muscle itself near its tendon of insertion, while the positive pole should be attached to a large electrode, applied over the abdomen or other indifferent point. It is useless to stimulate the motor-point except during the first two weeks, that is, before any nerve-endings have ceased to be stimulatable on account of degeneration.

Of course, contractures and other deformities should not be permitted; and even when paralysis is complete and irremediable they can be mainly prevented by the maintenance of proper posture. Orthopedic expedients are too often the resort of despair and the result of neglect in providing proper and early treatment, but when necessary the weak or atrophying muscles may be reinforced with advantage by elastic suspenders.

The Danger of Routine Practice in Senile Cases

By I. L. NASCHER, M. D., New York City

ROUTINE is the bane of medical practice. The artist falls into a certain style, and whatever his subject may be his style is there. The mechanic and the professional man gradually acquire routine habits in their work. The writer is recognized by the style of his writings, the preacher by the character of his sermons.

In like manner the physician falls into a certain routine in the method of diagnosis and treatment of diseases; he has his favorite operative procedures, his favorite drugs and prescriptions, his favorite method of meeting emergencies, even a favorite "cause of death." My gynecologic friend says it requires an effort to refrain from asking questions about menses and childbirth when examining a male patient, and my neurologic neighbor looks for a mental or nervous taint when treating an ingrowing toe-nail.

No harm can result when a routine method is so broad as to include possible as well as probable conditions, as for instance when a physician makes it a rule to examine the heart and lungs in every case, although there be no symptom pointing to their involvement. But no routine practice that may be followed in maturity, whether in diagnosis or treatment, will avail in senile cases, while, contrarywise, the methods employed successfully in maturity often will be detrimental in senility. In maturity, nature cures, and our efforts are directed to aid nature; in senility, nature kills, and so the same measures which aid nature in maturity aid nature in senility in hastening death.

We must remember that senility is a physiologic entity which must be considered entirely apart from maturity, that pathologic processes act differently upon the senile degenerating tissue than upon the tissue of maturity, present a different clinical picture, follow a different course, and require different treatment.

In taking up the prominent symptoms of a senile case, we must remember that the manifestations of the normal senile changes may be so pronounced as to mask the symptoms of a grave disease, that the symptoms often are misleading, and that any routine practice of forming a diagnosis from symptoms alone will lead to error.

The selection of drugs is the most difficult problem we have to deal with, not only in senile cases, but in the whole realm of medicine. Our knowledge of drug action is purely empirical, and the differences of drug action upon the healthy tissue of maturity, the senile degenerating tissue, and the tissue involved in a pathologic process, have not been studied. That differences exist, is unquestioned. I have frequently been disappointed in the action of drugs in senile diseases that were almost as reliable as specifics in the same diseases in maturity. The scope of this paper precludes a lengthy discussion of this factor in the treatment of disease in senility.

In dosage, we have the old dictum that children and the aged can not bear large doses, and physicians follow the routine practice of diminishing the dose of every

drug in old age, without system or reason. Yet many drugs must be given in larger doses in old age, to be effective—as can readily be determined by following the dosimetric plan of giving drugs.

Let me cite a few instances to show the dangers in following routine practice in treating the aged.

An Illustrative Case

Case 1.—P. G., age 68, saloon-keeper. About a year before I saw him he had been treated for kidney and heart trouble; he had a chronic cough, was short of breath when going up stairs, was habitually constipated, and had frequent headaches, especially at night after serving many liberal customers. Three days before I saw him he went to bed, saying he felt weak and sick all over.

There was no other pain than the usual headache; there was no chill, the skin was not hot, there was no excessive thirst; urine was scanty, but no difficulty in voiding it. He had taken a cathartic the day before I was called, as he had no appetite, and the family thought he had a "spoilt stomach." They told me that he had frequent weak spells, but these generally passed off in a few hours. This was all the information I could obtain.

There was not enough of a definite character to form even a conjectural diagnosis, the subjective symptoms pointing in many directions. The pulse was irregular, weak and beating between 85 and 100 a minute; temperature, 99.2° F. One single symptom, hardly noticeable on account of the dyspnea and shallow breathing, gave the clue to the probable diagnosis; the respiration was 24 a minute. My diagnosis of bronchopneumonia was confirmed by the physical signs, which also revealed a mitral obstruction.

The patient's condition remained unchanged for two days, but on the third day (the sixth of the disease) there was rapid prostration; slow, shallow breathing; pulse almost imperceptible; heart fluttering—the *tout ensemble* of collapse.

Following the routine practice in such cases, I gave whisky and a hypodermic of 1-100 grain of digitalin. There was immediate response, the pulse becoming stronger and steadier; however, after a few moments

there came a different, disastrous change. The face became flushed, there was a convulsive stiffening of the limbs, unconsciousness supervened, there were a few stertorous breaths, the head fell to one side—and all was over.

Textbooks are Unreliable

The history of this case is given to show the unreliability of textbook descriptions when applied to senile patients.

The essential point to be emphasized is the danger of giving digitalis, its active principles or other vasoconstrictors in threatened heart failure in the aged. This patient died from apoplexy, the result of a ruptured atheromatous cerebral artery, following the use of digitalis which, while increasing the force of the cardiac contractions, diminishes the caliber of the arteries.

Case 2.—Mrs. B. H., age 74. Answering an emergency call, I found the woman in the intense agony of gallstone colic. Her regular physician had left some medicine, of which she had taken a few doses but without obtaining relief. I gave 1-8 grain morphine hypodermically and she became quiet within a few minutes. An hour later she was found dead in bed. Her physician informed me that his medicine contained morphine in 1-8-grain doses; also, that she had chronic gastritis.

Some physicians make it a practice to give morphine hypodermically whenever there is pain. If quick action is required in persons of old age, morphine should always be given hypodermically and then in one dose sufficiently large to be effective. The danger of divided doses given by mouth arises from slow absorption and consequent cumulative effect.

Opium and its preparations inhibit intestinal peristalsis, and as peristalsis is already diminished as a result of the senile processes, if the drug is not readily absorbed it accumulates and we are liable to get the effect of the combined doses, exactly as happened in the case recorded.

Just a word about the action of opium and its salts in the aged. Opium should never be given in old age because it is slowly absorbed and it lessens the already diminished intestinal peristalsis.

The great danger in giving morphine is the depression of the respiratory centers, which, however, can be counteracted by combining it with atropine. With this precaution, morphine may be given in full doses.

A Case of Chronic Asthma

Case 3.—B. M., age 60, butcher. Suffered for years from bronchial asthma and found relief from inhalations of the fumes of stramonium, lobelia and saltpeter. I put him on the routine belladonna treatment, following Von Noorden's method of starting with atropine in 1-360-grain doses twice daily and gradually increasing the dose and its frequency. Two weeks later, when taking 1-120-grain doses, he complained of pain and pressure over the bladder and difficulty in urinating, with scanty urine. The catheter was used to relieve an overdistended bladder and the atropine was temporarily suspended, whereupon the atony of the bladder slowly disappeared, but returned when the atropine was resumed.

In an earlier case, in which there were, beside the bronchial asthma, a dilated bladder, an enlarged prostate, and atony of the sphincter, the belladonna treatment cured the asthma, but it produced a complete permanent atony of the bladder, entailing the use of the catheter during the remainder of the patient's life.

The essential point in this latter case is the importance of considering the secondary effects of drugs in old age. Belladonna has a pronounced sedative effect upon the terminal nerve-fibers of nonstriated muscle, and this gives it its value in spasms. But this same property contraindicates its use in the constipation of the aged, as this is generally due to lessened peristalsis from atony and waste of the muscular fibers of the intestines.

The belladonna in the popular aloin, strychnine and belladonna pill, which is given to counteract the griping effect of the aloin, at the same time counteracts the effect desired, namely, to stimulate the muscular fibers to peristaltic activity. Belladonna, moreover, has another undesirable effect in the treatment of senile constipation; it lessens the intestinal secretions. The routine treatment of constipation along the lines

followed in maturity will invariably fail in senility, as the causes and conditions are different.

Danger of Enemas

A moment's reflection will show why enemata, which distend and weaken the lower bowel, should never be used.

So, also, laxative salines should be avoided because by their osmotic action fluid is withdrawn from the vascular system and into the bowel and so voided with the feces. The increased viscosity of the blood, the dryness of the skin and diminished secretions should indicate to the thoughtful physician that the fluids of the body are deficient in old age and that the individual can ill bear further depletion. The saline laxatives may be used with advantage in the obese or for occasional variation from other cathartics, but they must be given in small doses well diluted, preferably in hot water.

[This advice does not agree with that of Burggraave, who especially advised the use of the dosimetric "sedlitz" (an effervescent magnesium sulphate) which he took every day of his life, up to the day of his death, in his ninety-seventh year. The salines should of course not be taken when the body is markedly deficient in fluids, especially if there is meagerness of flesh.—ED.]

There is a special danger in old age from the routine practice of giving hypnotics for insomnia. The aged frequently complain that they cannot sleep more than a few hours at night. In most instances this is not true insomnia, however, for while the individual does not sleep more than a few hours at night, he dozes off frequently during the day, takes a nap after meals, and on the whole he gets more sleep than he requires. Often his naps and dozes last for hours, although he imagines that he slept but a few minutes. Hypnotics are frequently prescribed in these cases, when, in fact, they are unnecessary.

Chloral is dangerous in old age on account of its depressing effect upon the heart if given in therapeutic doses. If a hypnotic is necessary, a hot bath should be tried; if this is not effected, veronal may be given. If the insomnia is due to mental agitation—

a frequent cause in old age—monobromated camphor should be added to the veronal.

This paper is intended to be merely suggestive and not dogmatic. The routine practice of making a thorough examination in every instance, looking for possible diseases which do not present marked symptoms, as well as for those in which pathognomonic symptoms are evident, is a good routine practice in old age. But the practice of treating diseases along routine lines, ignoring the factor of age, except perhaps to the extent of diminishing the doses in a haphazard manner, is wrong. This is not dogma, but common sense.

If the final cause of death in every case of an aged person be analyzed and traced to its original cause, it will be found that

many deaths are due to improper treatment, to the routine practice of treating a disease in old age as we would the same disease in maturity. Case 1 is an example of this.

We may ease our conscience by the thought that the old patient would have died anyway, that he was a burden to himself, his family and the state. All the same, these moral evasions do not excuse our ignorance or neglect of the cardinal principles of Geriatrics, namely, that senility is a physiologic entity to be considered apart from maturity, and, further, that senile diseases are diseases *sui generis*, differing from similar diseases in maturity in the action of pathologic processes on senile tissue, in symptoms, signs, course and as to method of management

Whom Shall I Serve?*

The Doctor's Duty to Himself and Family—and to the Deadbeat

By N. C. MILLS, M. D., Big Run, Pennsylvania

EDITORIAL NOTE—In the January and February numbers of this year we published two articles By Dr. Sayers, telling of the work of the Redbank Physicians' Protective Association. Dr. Mills's article is a further development of the ideas presented in those two papers. It is a strong plea for self-protection on the physician's part; for clean, square, effective business methods, based upon professional cooperation. Every physician should read it.

I AM fully convinced, and know that you will agree with me before I have finished, that the Punxsutawney members of this Association could have chosen a more able representative on this occasion. It so happens that I was the first member of our local association to receive any financial benefit from the organization. On this account I was singled out as their representative to you and for this same reason I accepted the honor, not that I can do it justice, but because I already feel indebted to the Redbank Physicians' Protective Association and desire to aid the cause.

This subject of service to our fellow men is one upon which volumes have been written. From the time of Hippocrates to the present age we, as physicians, have rendered our full share of service to mankind.

The meaning of the French phrase, "*No-blesse oblige*"—rank imposes obligations—

has never been lost on the great body of physicians who have preceded us. It was born with the Father of Medicine, Hippocrates, and has been carefully nursed, rocked and nurtured ever since. From a lusty infant in his time, it has grown to full-fledged manhood. It makes its demands and will always get its just dues from us. A half century ago in this country these demands were exorbitant, yet our predecessors, amid unknown privations, fulfilled their duty.

Twenty-five years ago we began to demand some fair recompense for service, and only in the last ten years have we awakened to the fact that we have been imposed upon. As long as our profession exists the spirit of *noblesse oblige* will not die, actuated by the inborn spirit of humanity and that of the Golden Rule. For the love of their work and their fellow men, hundreds of our calling, both humble and great, have given up their

*Read before the Redbank Physicians' Protective Association.

lives—"and greater love hath no man than this, that a man lay down his life for his friends."

The nobility of our service is recognized by every earnest practitioner. We leave medical school with nothing but bright ideals, although later, in the University of Hard Knocks, they lose some of their lustre. The lives of such men as MacLaren, William McClure, Carroll, Kassabian and many others spur us on and make us proud of our Mistress. Year after year our members sacrifice life and limb to their calling. We leave in our wake martyrs to plague, fever, infection and the modern x-ray.

Truly, our position imposes many obligations, but, while we are physicians, we still are, or should be, men. As men we have our rights; as physicians, we desire them. As physicians we ought never to neglect the financial side of our profession. We have rights as physicians that in the past we have neglected to bring to the public eye. For every martyr in our profession we can find scores of women—good, cultured mothers and wives—condemned to lives of genteel poverty, widows left with a home, perhaps, and little else, except the ill-kept books of the late lamented "Jones, M. D."; children deprived of an education, and orphans left to the mercy of a none too gentle world, not because their fathers didn't earn enough, but because they did not, or probably could not, collect their just fees.

The Doctor's Income Small

Our profession has been crowded. "At the best," as one man has said, "our incomes are limited. The income of medical men does not compare with that which can be earned by a man in commercial life, who can employ a multitude of clerks and hands to increase his profits from his business. A doctor has to do everything himself and cannot delegate much of his work to assistants, with advantage. For this and many other reasons he is not likely to be a man of wealth."

There is little chance of accumulating money from the practice of medicine. A small competence can be saved by diligence, frugality and good management. It is estimated that the average earnings of physicians is somewhere between seven hundred

and one thousand dollars per year. This, I believe, is a low estimate in this locality. Suppose we say the average is between \$1200 and \$1500 per year; then it is evident that the man who earns \$1200 gets very little for what he does, considering the time spent and the amount of money invested in his education and equipment.

Others say of us, "Doctors are not good business men." Very few of us are, and we have to admit the fact. First of all, no man with good business instincts and a desire to accumulate wealth would enter our profession under present conditions. The best we can expect of it is a handsome income for a few. A competence for many and a mere pittance for the great majority—such are the pecuniary rewards which medicine offers its votaries.

If the average doctor had expended as much time in preparation, invested the cost of his education elsewhere and worked as many hours a day as he does, in any other business, he would either be considered unfortunate or a fool if he did not accumulate a competence at least.

This is all wrong. Why should we not all be men of comfortable means, if not wealthy, as well as men of ability and education? We are the laughing stock of the business world with our poor business methods. If any doctor who attends to his practice could collect the money due him with as little loss as would be tolerated in a well-conducted business house he would be in comfortable circumstances financially.

"Booking" Versus "Getting"

We customarily speak of what we book and what we get as two entirely different things. A doctor says: "I am hard up; I have not been collecting over \$150 a month, but I am booking over \$500." A business man who would make such a statement would expect it to cause lack of confidence in him in business circles and would see financial ruin staring him in the face. To whose door can we bring these conditions? To our own *alone*—and these are plain, hard facts.

There is, however, a remedy. Recently a new idea has been broached and that, if applied, will help us; this is that "coopera-

tion, and not competition, is the life of business." Let us not forget to apply it to this question.

Whom have we served in the past? Truly, their name is legion. We have served alike the rich and the poor, the deserving and the unworthy, the saint and the sinner, the prompt and the tardy, the grateful and the thankless, the honest man who pays in cash and the deadbeat who pays in slander. What has been our reward? A handsome income for a very few, a modest competence for many, a mere pittance for the great majority. The rich have paid us—often grudgingly, the poor have blessed us and damned us. We are open to the criticism and comment born of ignorance and superstition always. We have derived a pleasant satisfaction from befriending the worthy and have left the door of the unworthy with murder in our hearts.

The saints have blessed us and promised to intercede for us with good St. Peter. We may need their help at the gates, but it does not aid us materially here. The sinners we are prone to let off easily. Most of us are in their class. The honest man, rich or poor, is our only friend, the deadbeat, our worst enemy. A dog will lick the hand that feeds him. The deadbeat, like the wolf, hunts in packs and tears your reputation to shreds after you have befriended him.

Gratitude is Shortlived

"Man's inhumanity to man makes countless thousands mourn." Human gratitude is short-lived at best. "When the devil was sick the devil a monk would be, when the devil was well, the devil a monk was he." All these we have served in the past. Whom shall we serve in the future? "The laborer is worthy of his hire!" You and I deserve a just recompense for our services if the public hire us. For centuries past the laity, secure in its erroneous belief that we are compelled to serve them if called upon, with or without recompense, has had us at its beck and call.

Since 1587, when a Dutch painter and engraver published his series of four engravings depicting the attitude of patient toward physician, there has been no change. The

Latin inscriptions underneath these plates are worth repetition in free translation:

When the sick man lies abed distraught with pain
And dismal death is clutching at his throat,
He likens me to *God*, and all his house
Kneel down and do me reverence.

When easier lies his head and icy death removes
His hand and warm the blood rebounds,
He blesses me as messenger of *God*,
And holy *Angel* from ethereal high.

But when the full and rosy touch of life
Bestirs his flesh and puts his soul to sleep,
He greets me as a *Man*, tho' one of might
And versed in all the wisdom of the world.

And then at last, when recompense is asked,
He passes me in dread, for lo! to him I stand
A *Devil* horned from out the lowest depths.

So the Dutchman depicted us over three centuries ago to our patients, as *God*, *Angel*, *Man*, and *Devil*, and today their point of view remains unchanged. Whom do the other professions serve? Whom does the minister, the lawyer and the dentist serve? Whom does the business man, the merchant, the butcher, the baker, the candle-stick maker serve?

Elbert Hubbard classes us with the clergy as parasites. Since we come under the same head, compare the compensations we each receive. Whether a clergyman draws a salary of \$800 or \$5000 a year, he generally gets it. He works much or little, as he chooses, and where will you get one who will not leave an \$800 church to accept one which pays \$1000 or \$1500 for his service as a sign-post to point the way to heaven?

How many criminal lawyers have we practising in our courts today for the sake of defending the poor wretch without money? What one so doing would not gladly sell his services to the corporation offering the highest salary?

Do our dentists replace the decayed molars and incisors of the general public with the best bridge-work unless they are sure of their pay beforehand?

A Bad Motto—And a Good One

"Do your duty and then collect your money" (if you can) has been our motto. "Be sure of your money before you deliver the goods" is the motto of the business man, the banker, the butcher, the laborer, the farmer. Why should *we* not adopt it? Not

only are we poor collectors, but we seem to encourage an expectation on the part of the public that we shall always be so. We even sneer at the colleague as a close-fisted, penurious cuss, who is a good collector. Some of you may deny it, but so inbred is our lack of business sense that deep in your hearts you condemn the business-like doctor and in the same breath damn the laity for not paying you.

By poor business methods, by not sending out our bills promptly and making every effort to collect our just fees, we have directly encouraged the individual whom we are now working to reach. Our campaign at present will prove a liberal education to him in honest and right living. Any right-thinking man, any honest man will applaud and heartily approve our purpose. On the other hand, there will be some—even among the profession—who will deem us lacking in sympathy, condemn our methods as being too drastic, and frown on the Redbank Physicians' Protective Association as any fresh innovation is frowned upon.

The laity expects much of us nowadays. The only way we can satisfy their expectations, keep up to date in literature, equipment and newer, better methods, is to show them that we, in return, expect a prompt and just recompense for our service. Let them

know that we are not only progressive physicians but progressive, live, up-to-date business men as well.

Farewell to the past with its encouragement of the deadbeat, the man who pays tardily, the man who always expects you to discount his bill, and the one who wants to trade "truck for truck," as he expresses it. Welcome the bright future, when we shall work for two classes only, to wit, the abject and deserving poor, and the man who pays promptly and in full, with no questions asked.

Let us be careful in our charity, lest we cast our pearls before swine. Something for nothing is rarely appreciated. Remember, we are men first, physicians after that. We have duties to ourselves, our families and our profession, as well as to mankind in general. Our noble profession has never failed in the latter duty and it never will—actuated by the spirit of our predecessors and preceptors. But we must become more proficient business men to become more efficient physicians, and we must raise its standard to a higher level before the public.

First, get the attention of the public, then gain its respect, and finally end by getting the recompense which you have honestly earned, when you want it, and accept no counterfeits.

The Action of Chromium Sulphate in Prostatic Disease

By HENEAGE GIBBES, M. D., L. R. C. P. (Lond.), McAlester, Okla.

CHROMIUM SULPHATE as a therapeutic agent has recently made its appearance in medical literature, and unusual claims have been made for it by some writers. However, experience with this drug has been so limited in time that it is impossible as yet to explain the rationale of its undoubted beneficial action, and so I must content myself for the present with a description of what it has done in my hands.

In the first case in which I tried the chromium sulphate, I used it in combination with calcium sulphide, and then I got results

that proved to me that either calcium sulphide was accomplishing more than it had ever done before or that the other remedy was taking a hand in the work.

The case was that of a man of seventy-four who had led a more or less reckless life in many different countries, from the Arctic Ocean to the tropics, and who had a history of numerous infections of gonorrhea, but absolutely none of syphilis. He was a man of some education, so that one could form a pretty fair idea of when he was speaking the truth.

The first trouble had been an acute urethritis, for which he had been treated and, as the doctor told him, was cured. But after some time he noticed that the stream of urine gradually grew smaller and he began to experience pain in the perineum and at the end of the penis. This not ceasing, he went to a doctor, who gave him an injection, which soon brought things to a climax.

Pain Develops During Urination

He came to me with the following history and present condition: After using the injection for two days the pain became so intense that he had to stop it. That morning he was urinating, when the stream suddenly stopped, and he suffered the most excruciating pains until he passed a quantity of blood followed by a lot of pus. When he got rid of this, he felt considerably easier, but was so scared that he laid off work and came to me. I found the prostate very much enlarged, and it had a baggy feeling and gentle pressure brought away more pus. The man absolutely refused operation.

I gave him, at once, my old standby, blue mass, rhubarb and ipecac, to be followed in six hours by a large dose of saline laxative. I also gave, every four hours, six granules of calcium sulphide with one of the dosimetric trinity; also some formin for probable sepsis. I suspended the testes, and told him to lie down all he could until I came next morning. I ordered avoiding of solid food, warm rice water to drink, and besides gave him one granule of H-M-C, modified, with instructions to take the tablet after he was in bed and ready to go to sleep. Next morning I found great improvement. The medicine had acted well, the prostate was decidedly smaller, there was no pus, and the heat and pain had disappeared.

This seemed to me to be the time to try chromium sulphate. I reduced the calcium sulphide, and gave 4 grains of chromium sulphate three times a day, keeping the intestinal canal free from accumulations with saline laxative. After two days the calcium sulphide was stopped and the chromium sulphide increased to 8 grains after each meal and at bedtime; also one dose of blue mass, rhubarb and ipecac, in the week, and

a small dose of saline laxative every morning.

The condition now, after four weeks, is this: The prostate is down nearly to normal; there is no hesitation about micturition and the stream is fairly large. The man's health is better than it has been for months, but there is a small bridge-stricture, and I feel certain that if this is not attended to, a woman with a bad chronic leucorrhea would set up an attack of acute urethritis and most of the trouble would recur.

The Two Following Cases

In my next two cases there simply was a gradual increase in the size of the prostate and encroachment on the urinary passages to such an extent that the victims had entered upon a catheter-life, a condition when it seems to me to become a question whether life is really worth living. Here the effect of chromium sulphate has been remarkable, one of the patients having entirely given up the use of the catheter, and the other hoping to do so before very long. In each instance the prostate has become much reduced in size, and I particularly noticed the loss of that hard, brawny feeling which was very marked in one of these cases.

Now I am waiting for an opportunity to get hold of a prostate gland that had been influenced by chromium sulphate, and make a histological examination, as I am not clear as to what part is being acted upon by the chromium sulphate, considering the large amount of nonstriped muscle there is in this organ. I think it is important to find out on what tissue the chromium is acting, as it may possibly be applied to a different condition in some other part of the body where the tissue for which it has a special affinity exists in large amount.

I have another case in which the diseased prostate responds to the chrome treatment. This is one in which I am especially interested, as I have been able to examine the patient closely and constantly. There had been two abscesses, about three months apart, which had both ruptured into the urethra, each time the patient suffering terribly, and I was kept in constant dread of septicemia. I had been treating, each time, with calcium sulphide and formin. When

the acute symptoms had entirely subsided I made a very thorough examination of this patient's urine, blood and everything, to establish his present condition, so that I could determine when there was any indication of a commencing departure from what I considered, in his case, to be the normal condition. He improved in every way, gained weight and appetite, hemoglobin percentage became nearly normal, micturition was in a steady flow, though small; altogether the man was in as good condition as I expected he ever would be.

This went on for nearly three months and I hoped it would continue. It did not, however, for he came to me and said he had a pain in what he called "no-man's land."

I found, on inspection, a swollen prostate, hot, sore and throbbing. I gave him an alterative pill at once, to be followed in six hours by a double dose of saline laxative. I ordered suspension, fomentation, etc., and then I determined to try chromium sulphate, at the beginning with the calcium sulphide.

I gave 6 granules of calcium sulphide (gr. 1) with 4 grains of chromium sulphate, to be repeated in three hours. I purposed making a thorough examination six hours after the first dose. Blood examination showed hyperleukocytosis, mainly polymorphonuclear, but some large mononuclear cells were present. I never tried to find out what had caused this change, and after a

good deal of circumlocation I found that ten days before he had accepted an invitation to a Dutch supper where he had imbibed a quantity of lager beer, although strictly forbidden to take beer of any kind. He said he felt so well after that, he continued the lager beer until the day before he came to me, when he began to feel some of the sensations he had experienced before.

Six hours later I found some improvement, the throbbing had ceased and the tense, hot feeling was much reduced; altogether, I found a condition where I felt I could gradually reduce the calcium sulphide and increase the chromium sulphate, which I did until twenty-four hours later, when he was taking 8 grains of chromium sulphate three times a day, and no calcium sulphide. He is, in fact, back nearly to the condition he was in before the Dutch supper got in its work.

I shall watch this case closely, as I think it will show the value of chromium sulphate in these conditions. So far it has done well in my hands, and I cannot see why the good done should not be permanent. We cannot tell yet exactly what it does or on what tissue its influence is exerted, and I am waiting anxiously to get a prostate that has gone through this treatment. One thing is quite plain to me, and that is, a man about sixty should never tempt his prostate with a Dutch supper.

THE FIGURER

This world contains a lot of folks
Who fret us more or less
By poor or misdirected jokes
Or ill-timed seriousness.
But he who brings the deepest doubt
Is that unfaltering one
Who gets a lot of figures out
To prove "it can't be done!"

The proudest schemes of progress fall
And shattered hopes lie thick,
When calmly he proceeds to call
On his arithmetic.
More hideous than the vandal shout,
His voice spoils all our fun,
When he brings rows of figures out
To prove "it can't be done!"

Your plans of glory, though they be
Both lofty and immense,
Will shrivel like a leaf when he
Says, "Think of the expense!"
He's Disappointment's special scout
And Hardluck's favorite son,
This man who gets his figures out
To prove "it can't be done!"

Appendicitis: A Preliminary Review

By BENJAMIN H. BREAKSTONE, B. S., M. D., Chicago, Ill.

Professor of Clinical Surgery, Bennett Medical College; Consulting Surgeon, Mary Thompson Hospital; Attending Surgeon, Jefferson Park Hospital.

EDITORIAL NOTE.—This paper is a part of Dr. Breakstone's interesting series on "Every-Day Surgery", which has been running in "Clinical Medicine" for several months. The Doctor discusses the surgical diseases in which the general practitioner is most interested, and describes methods that the "every-day" man can use. Most of the operations described can be performed under local anesthesia, in the doctor's own office. These papers will ultimately be reproduced in book form, at a very moderate price. Those interested are requested to communicate with The Clinic Publishing Company.

BEFORE going into a discussion of appendicitis proper, it seems to me advantageous to go briefly over the anatomy of the organ, and also its adjacent parts.

The appendix is a small, narrow, blind pouch, varying greatly in size as to length, caliber, thickness of its walls, etc., in different individuals. It is a continuation of the gastrointestinal tract, and therefore is made up of the same structures as the intestine, namely: an inner lining of mucous membrane of epithelial cells; a submucous coat, containing glands; a muscular coat; and a peritoneal covering, or serous coat. This organ arises from the most dependent portion, or nearly so, of the cecum. Its caliber is conical, that is, it is smaller as we approach its distal end, it is two and a half to six inches in length, and normally is perfectly movable. It is well to remember this latter point, as many vaguely located pains can be explained by remembering the motility of this organ.

The appendix is comparatively useless. In the lower animals it is the location of their second stomach, being rudimentary only in man. This organ, more than any other in the body, proves the Darwinian theory of evolution, for in each succeeding generation it is found to be smaller and smaller, and two persons were recently operated upon by prominent European surgeons in whom no appendix nor any trace of one was found. (*Virginia Medical Semi-Monthly*, Michaux, Sept. 12, 1903.)

The appendix is situated in the right iliac fossa. The proximal end is at a point midway between the anterior superior spine

of the ilium and the umbilicus, technically known as McBurney's point. This location was first described by McBurney, of the Roosevelt Hospital of New York, who was one of the surgeons attending on the late President McKinley, and who was also called to operate upon the late President Harper, of the University of Chicago.

The function of the appendix is unknown, but it probably secretes a lubricating fluid which it throws into the cecum to aid in the propulsion of the feces into the ascending colon.

The range of motility of the appendix is equivalent to a radius of from two to six inches with McBurney's point as a center. This is very important to remember, and will also explain many of the vague locations of pain in appendicitis.

Definition and Varieties

Appendicitis, as the term naturally suggests, is an inflammation of the lining membrane, primarily at least, of the appendix. Like all other inflammations, this inflammation may be acute or chronic, suppurative, perforative, gangrenous, catarrhal, and tuberculous.

Most of the cases that come to the physician are acute. In more than five hundred autopsies, every appendix, even though macroscopically normal, microscopically has been found to have been inflamed at some time or other, whether the subject had had symptoms of appendicitis or not. Therefore, an acute appendicitis can only occur in an appendix which has previously been chronically inflamed. Tuberculous appendicitis is almost always secondary. Catar-

rhial appendicitis is the recurring appendicitis of some authors, and is the one which gives the most encouragement to medicinal treatment. Suppurative, gangrenous and perforative appendicitis are always none other than surgical diseases.

Etiology of Appendicitis

Appendicitis may occur at any age, but most usually it occurs in adults between the ages of 20 and 35 years. It occurs in both sexes, but the majority of cases are in the males. Climate, environment, season and altitude have very little influence on the etiology of this disease.

The exciting cause is unknown, but constipation undoubtedly plays an important role, the reason for which can be anatomically explained. In constipation the feces fill up the entire colon, with practically no peristalsis; and as there is no reverse peristalsis (and even if there were, the ileum is guarded from a reverse movement of the feces by the ileocecal valve), the cecum dilates, this also causing the opening of the appendix, which is a continuation of the former, so that feces enter the appendix and there act as an irritating foreign body. The appendix having little or no peristaltic movement, is powerless to expel this foreign body, and appendicitis results.

Authorities differ as to this explanation, many having no regard for this foreign-body theory at all. It is my own personal opinion, however, that if there were no constipation there would be no appendicitis, excepting that which is caused by traumatism or an inflammation by extension from adjacent organs, or by tuberculosis, etc.

Symptoms of the Disease

The symptoms of appendicitis may be briefly enumerated as follows: (1) Headache. (2) Nausea. (3) Vomiting. (4) Constipation. (5) Pain in the right iliac fossa. (6) Tenderness at McBurney's point. (7) Rigidity of the abdominal muscles on the right side. (8) Fever and rapid, wiry pulse, anxious countenance. (9) Pallor. (10) Leukocytosis.

The patient usually lies in bed on his back, with the right thigh or both thighs and legs flexed to relieve the tension in the abdomen. He also places one or both hands over the

region of the appendix, exerting pressure and imparting heat to the part in the hope of obtaining relief.

The symptoms I have mentioned may not all be present, or they may be present in varying degrees of intensity. We will now take them up one by one.

Headache is usually present and often is very severe. However, in many cases, especially in the mild ones, it may be slight or even absent. Nausea and vomiting are present, especially in severe cases or in cases following a long period of constipation. This symptom, however, may also be absent in some cases. Constipation is present in nearly all cases. However, there may be a diarrhea just preceding the attack.

The symptom which brings the victims to the doctor is pain in the right iliac fossa. This is one of the characteristic symptoms. It is very severe in acute cases, but only slight in catarrhal cases, and comes on suddenly. The pain, however, may be anywhere in the region of the appendix. For, as the appendix is a movable or floating organ, it is plain that the pain may be felt at any point within a radius of two to six inches from McBurney's point, while very often being felt on the left side or back of the cecum or in the region of the kidney, gall-bladder, or ovary or fallopian tube, etc.

The Characteristic Local Tenderness

The most reliable symptom, however, is tenderness at McBurney's point. The way to elicit this tenderness best, is to put the palm of one hand over the right iliac fossa and exert gentle but firm pressure, then with the index-finger of the other hand endeavoring to detect tenderness at or about McBurney's point. The abdomen in most cases is very tender, at all events, but if one follows this method, he can detect this especial point of tenderness in every case. This tenderness, of course, varies in degree in different individuals, but is usually quite marked.

There will be no trouble in finding the rigidity of the abdominal muscles on the right side, especially if compared with the left side. Of course in cases which have lasted some time, and general peritonitis has set in, then the entire abdomen will feel

rigid. This rigidity is a result of the hyperesthesia caused by the pain and avoids any unnecessary motion or disturbance of the parts within. In other words, it is nature's way of securing rest for the inflamed part.

The temperature usually runs up suddenly to 102° or 104° F., or even higher. In acute, severe cases there is always elevated temperature. Especially in the suppurative form is there high temperature. In the catarrhal form the temperature may not be over 100° or 101° F., or there may be no temperature at all. In the gangrenous form, also, there is generally no temperature. The temperature remains high in the acute form until perforation takes place, then it drops. In suppurative appendicitis the temperature is generally irregular, that is, it varies during the day, and also from day to day. The pulse is rapid and wiry, and varies in different individuals, being extremely rapid in nervous patients. It is regular, however.

There is no marked leukocytosis except in the perforative or suppurative form, and when there is a sudden marked increase of the white cells, it is an indication that perforation has occurred or that pus has been thrown out into the abdominal cavity. It is important in deciding whether to operate or not, in cases that have lasted several days, to watch this sign, for if there is a sudden marked increase in the number of leukocytes, it is advisable to operate at once whether there are other indications for operation or not.

The Characteristic Facies

The countenance usually is pale, but in the presence of a high fever may be flushed, while in severe pain there is a pinched and anxious expression. In gangrenous appendicitis the countenance has a peculiar dusky, copper-colored hue, and this is often the only sign which tells the surgeon, even in the absence of all other symptoms, to operate at once. The tongue is coated with a white or dirty fur. I mention these points merely to emphasize the importance of the various symptoms.

On physical examination, there are no special diagnostic signs, if there are no adhesions, but if an abscess is formed and adhesions occur to wall off the abscess, then a

tumor may be felt in the right iliac fossa, which has a doughy feeling or perhaps harder, and on percussion there will be a perceptible dullness over the area of this tumor, or there may be dullness without the tumor being felt. There will be no dullness without adhesions to wall off the abscess, at any rate the dullness will not be isolated in the region of the appendix. Auscultation often will give us a gurgling sound, which, however, is of little or no importance.

Pathology of Appendicitis

In order to understand the pathology of this disease, it is necessary to have a clear idea of its histology, which I take for granted all understand.

The mucous lining becomes red and swollen. The glands cease to secrete, and there is a desquamation of epithelial cells. This inflammation may extend to the other walls of the appendix, suppuration and ulceration may take place and may perforate through the walls into the peritoneal cavity, and thus general peritonitis may result. The reason why perforation so often occurs is that the appendix is deficient in yellow elastic fibers, and therefore cannot undergo a severe swelling from congestion without rupturing.

In an ordinary appendicular colic the foreign body simply enters and the appendix forces it back into the cecum, and thus relief is afforded. As there are always bacteria in the intestinal tract and as the appendix is a useless organ with a poor blood supply, we can readily see that its power of resolution is very much limited. The bacteria most usually found are the pus microbes, the bacillus coli communis, and, in tuberculosis, the tubercle bacillus.

In the suppurative form the abscess may open out into the cecum, and the pus being thrown out with the feces, it may open out into the peritoneum, causing a general peritonitis. From this, adhesion may form, in the female, with the fallopian tube and the pus be expelled through that channel; or adhesions may form around the appendix, walling it off and forming an isolated abscess followed by absorption. Sometimes the appendix becomes calcified, breaks off into the cecum and is expelled with the feces,

thus giving a natural appendectomy and a permanent cure. In tuberculous appendicitis caseation may occur.

Complications may occur by extension, by rupture, or by absorption, and are as follows: Typhlitis, peritonitis, gangrene, salpingitis, oophoritis, cholecystitis, and a few others.

Among the favorable sequellæ are complete resolution, isolated abscess, and cicatrization. Among the unfavorable ones are gangrene, perforation, peritonitis, septicemia, recurrence, pyemia and hernia.

Diagnosis

This disease is often the most difficult of all diseases to diagnose positively. However, if we bear in mind the picture I have drawn, especially the pain, tenderness, rigidity, headache, nausea and vomiting, we ought to make a diagnosis in the majority

of cases, especially when the appendix has a normal location. The diagnosis should be made in the first twenty-four hours if we wish to do our patient the most good.

If an adult comes to us, or rather if we are called to him, giving a history of constipation for several days and a sudden pain of a severe character in the right iliac fossa, with tenderness at McBurney's point, and even with no other symptoms, we should at once at least strongly suspect appendicitis. The diseases from which appendicitis is to be differentiated are as follows:

Typhoid fever, movable kidney, salpingitis, oophoritis, gallstones, stone in the ureter, rheumatism, intestinal obstruction, extrauterine pregnancy, tubercular peritonitis, carcinoma, sarcoma of cecum or ileum, typhlitis, paratyphlitis, hernia, and hysteria, and in children the onset of scarlet fever.

(To be Continued.)

Mistakes

I. The "Run-Down" Man or Women

By CURRAN POPE, M. D., Louisville, Kentucky

Formerly Professor of Physiotherapy, University of Louisville;
Medical Superintendent, The Pope Sanitarium

EDITORIAL NOTE.—This paper will be followed by others on the same general topic, all exceedingly practical and helpful, and written in the entertaining style of which Dr. Pope is a master. These papers will help us to avoid some common errors.

THE "average" man or woman has an innate feeling that he or she possesses sufficient medical knowledge to understand the "simple" ailments that afflict themselves and their acquaintances. They abound in "curbstone" diagnoses, and with equal readiness prescribe, feeling none of that hesitation that a more thorough knowledge of pathology would unquestionably bring forth.

They are the lightning diagnosticators and prognosticators and therapeuticians, medicating themselves and friends (?) on the old boyhood basis of "sight unseen."

I confess I would much rather take my chances on "swapping" horses in the middle of the stream than to follow such suggestions. These purely *assumptive* diagnoses are

sometimes fraught with sad results, allowing the golden opportunity to pass when intelligent medicine and surgery *might* have saved the day. Sometimes we can undo and at the same time preach a propaganda of education. That will help others to see the light.

Few of the laity realize the real research necessary and the difficulties that attend upon a careful and successful diagnosis of an average case. They cannot be made to appreciate the need of knowing what he "has not," as well as the actual disorder or disease present. If, then, it becomes necessary for the *trained* diagnostician to call to his aid special apparatus and the research laboratory when the possibilities for error are so great, what chance has the layman of hitting

the target in the dark? About the same proportionate chance as the finding of the needle in the proverbial haystack.

Slip-Shod Medical Methods

The failure of the laity to utilize medical knowledge and experience is, I am afraid, in many instances, fostered by a similar method on the part of the medical man himself. The listening to a few symptoms detailed by the patient, the asking of a few questions, usually concerning the cloaca maxima, the feeling of the pulse, the glance at the tongue, and the inevitable prescription, based on little or no *real medical* knowledge of the patient, has a tendency to undermine that faith and confidence that should ever be the heritage and portion of the medical man.

Every medical man makes errors, indeed grave and serious errors, and grievously do they suffer; for doctors are human, yes, doubly human, and often so tired that they lack the keen perception needed. But they make no more mistakes than investors or train dispatchers. If doctors, then, make these mistakes, there is very little chance of the layman escaping from error in his efforts to diagnose his own case. If the diagnosis be so hasty and prone to error, what about therapeutics based on the diagnosis? I am afraid the layman is in the position of the doctor who treated his own case and had a fool for a patient. Of all the delusions that possess the nonmedical world, none is so marked as the delusion that masquerades under the title of "run down."

The Patient Who is "Rundown"

When is a man or woman generally considered to be "run down"? In a restricted sense, it is taken to mean one who really has nothing *much* (?) the matter with him, whose machinery is intact, whose mainspring needs "just a little" winding, whose joints need a little oiling; in fact, any one of a dozen ideas, the central core or belief of which is that their general "tone" has been a little lowered.

This being the case, they need a "tonic." Ah! the delusion of that tonic. It is to put renewed vigor into the individual regardless of his *status quo*, regardless of his organic condition. Under such circumstances most

persons have recourse to calomel and quinine, under the belief that they are "*run down*" because of malaria. This, I believe to be especially true of those who live in the South. What is far worse than the nonmedical use of quinine and calomel, is the use of whisky as a "bracer"—a small "tonic" dose. This can be kept up until the minds of certain individuals comprehend a "tonic" (?) dose at from one to two ounces several times a day.

Of the taking of quack, patent and proprietary remedies, much has been said and written, doubtless all true. This promiscuous habit has wrought havoc for years. It cannot be too heartily condemned. Self-prescribing over the drug-counter is ruining the real pharmacist. Let me here say that I cannot too heartily condemn the habit of handing around a physician's prescription from friend to friend, regardless of its contents, the indications or the dangers. It "helped" me; *ergo*, it will help you. Will it? To my mind there is a doubt.

Let Us Learn to Know Our Patients

In order to prevent this state of affairs, we must, as medical men, learn really to know our patients. A clear anamnesis, a careful and thorough physical examination, the analysis or examination of the bodily secretions should constitute the *routine* of cases and not the exception. When this is done, many of the "curiosities" would disappear. Remember, we can never know too much about our patients.

Having made a *real* diagnosis, knowing the functional state of our patient, we can readily outline the hygiene, diet, and treatment necessary. The "run down" condition will relegate itself into some well-defined entity and will soon yield to direct and specific therapy. Such work is at all times a satisfaction, a pleasure, and will prove constantly educative.

The points I wish to emphasize are these:

1. "Run-down" conditions medically do not exist; we want clear and specific diagnoses.
2. Laymen are incompetent as diagnosticians, and worse as therapeuticians.
3. That they frequently injure themselves and their acquaintances by preventing

prompt and proper medication, through prescribing patents, old prescriptions and proprietaries.

4. That diagnoses based on a clear anamnesis, a physical examination, and analyses of the secretions are more likely to be accurate and correct.

5. That therapeutics based on such a correct or scientific diagnosis yields, in these cases referred to as "run down," prompt and satisfactory results.

6. That a clear conception of the conditions by the medical man never injures the patient's case.

7. That physicians must learn to write their own prescriptions, in technical terms, and place upon each prescription a Latin sentence forbidding a copy or its refilling.

8. That the best method to break up "counter-" and self-prescribing is the knowledge that prompt and sure relief can be obtained from the medical man.

Technic of Intravenous Infusion of Nuclein

Supplementing an Article on Treating Tuberculosis by This Method which Appeared in the June Number

By EDGAR P. WARD, M. D., St. Louis, Missouri

Professor of Embryology and Clinical Medicine, Hippocratean College of Medicine

HAVING received so many requests for more details in giving nuclein by intravenous infusion, since my contribution thereon to THE AMERICAN JOURNAL OF CLINICAL MEDICINE, and being unable to reply to them all individually, yet realizing how necessary it is that the technic be thoroughly understood and practised correctly in order to obtain the favorable results that I have had, I offer the following specific instructions.

Intravenous infusion with an ordinary infusion-needle (number 18 or 20) must be accomplished with the least possible pain in order to secure the patient's consent for the large number of infusions that it is necessary to give. Hurt the patient, and he will refuse further treatment of that character, even if he does not leave you altogether. With care and close attention to details, as given herein, you will have no trouble whatever in retaining the patient. Also, after he has received several infusions, you will be agreeably surprised at the readiness with which he will submit to the procedure and his longing for the time for the next infusion. So, also, when you fail to penetrate the vein, as sometimes happens, especially at first, these patients will be greatly disappointed and many times will submit to much personal discomfort while you are continuing your

efforts in this direction. I may add that when you have once succeeded in getting into the vein, every attempt thereafter is much easier; the vein "welds up" much better or is gradually educated up to the work to be accomplished.

Overcoming Difficulties in Puncturing a Vein

Fortunately for this method of treatment, the veins are nearly always found to be quite prominent in the arms. Occasionally, though, we will find a patient with exceedingly small veins. Then, indeed, we may anticipate some difficulty in getting the needle to puncture it, for such a vein will slip away from the needle point, while if you make too quick a puncture, there is danger of going clear through it, or of only puncturing the wall and not getting into the lumen of the vessel at all.

An infallible sign that your needle is in the lumen of the vein is, that there is no swelling of the tissues. If the needle has failed to enter the lumen of the vein, immediately upon the flow of the fluid being established, a puffiness will appear and the skin bulge out. If that is the case, then reapply the elastic ligature, withdraw the needle slightly, and endeavor to impale the vein upon the point of the needle. If much of the fluid has gotten into the subcutaneous tissue, it is practically

impossible to insert the needle in the veins of that arm, unless you withdraw it entirely and make a new puncture at some distance from the original point, or better still, take the other arm and faithfully carry out the details there.

Importance of Surgical Cleanliness

In executing intravenous infusion, too much attention cannot be bestowed upon surgical cleanliness, for it must always be borne in mind that you are entering directly into the great circulatory system of the body, and that whatever you introduce is going to be carried to the remotest parts of the body, to tissues that are subject to quick reaction to any foreign substance, and if that substance be a deleterious one, that the reaction will be profound and may jeopard the life of the patient.

Thoroughly scrub with a good antiseptic soap an area of the skin of at least six inches from the point where the needle is to be inserted; then wash off with alcohol and apply an alcohol pad where puncture is to be made.

In order to carry out successfully this operation, the operator should be fully equipped, and these appliances should be used for no other purpose whatever.

Preparing the Nuclein Solution

An infusion-bottle holding one-half pint, or a glass percolator of the same capacity, to which is attached about six feet of one-quarter inch pure-gum tubing provided with a shut-off valve, should be thoroughly sterilized by boiling for twenty minutes. The infusion-needle may be sterilized by boiling at the same time.

Prepare a normal salt solution (using the formula I have previously recommended) of sufficient quantity for the individual patient. In making this normal saline solution, be careful to use pure distilled water, sterilizing the same in a water-bath for twenty minutes. This will raise the temperature to 120° to 130° F. Then add the required amount of solution of sodium triticonucleinate, and mix thoroughly by agitation. We are now ready to place our nuclein solution in the containing apparatus. Attach the infusion-needle to the distal end of the rubber tubing, and

carefully see to it that all of the air has an opportunity to escape from the tube before you insert the needle.

Making the Arm Ready

Now apply an elastic ligature about six inches above the elbow. For this ligature I use an ordinary rubber band cut so as to give



Fig. 1. Applying the elastic ligature

one strip six inches long and one-half inch wide. Place in the patient's hand a hard rubber ball about two inches in diameter, directing him to grasp it firmly. Now tighten the band. It takes some practice to learn just how taut to draw this. It must not bind so as to interfere with the arterial circulation, for if it does, you will fail to get the desirable prominence of the vein.

With the elastic ligature adjusted, and having the patient squeeze firmly upon the rubber ball, the veins will become very prominent and tense; valves in the smaller vein are readily discernible and the median basilic and median cephalic will become quite prominent. Leave the ligature on for a minute or more. If the veins do not become prominent enough, have the patient hang the arm down toward the floor. The firm pressure serves a twofold purpose: it places the muscles in contraction, making them hard and firm; it also draws the skin tautly over the muscles and enables one to see the veins, and this is particularly the case when the veins lie deep, as they sometimes do.

I always use veins upon the flexor parts. I know of no reason why veins upon the

extensor surfaces should not be used, except that my patients always complain of a great deal of pain, both at puncturing and while the fluid is flowing.

Modus Operandi of Injecting

Having everything prepared, I now spray the point of puncture with ethyl chloride. Then grasping the skin between thumb and index-finger of my left hand, I gently push



Fig. 2. Insertion of the infusion-needle

the infusion-needle through the skin and into the subcutaneous tissue. Press the skin flat over the vein selected and gently feel with the point of your needle for the vessel.

Always enter the vein from the lateral or inferior surface.

Having fixed the point of your needle upon the wall, by gentle and steady pressure force it through the wall of the vein. When you have fixed the point upon the wall of the vein, your needle should be held at an obtuse angle to the vein. The pressure upon the needle must be so under your control that it may be instantly relaxed as soon as you feel absence of resistance after having penetrated the wall. If it is not under control, you will very likely puncture the opposite wall; in which event it will be impossible to use that vein, on account of leakage from the second puncture, even if the opening of the needle is successfully drawn back into the vein. If the needle has passed clear through the vein, it is much better to withdraw it and insert it higher up in the same vein or to attack another one instead.

The needle having been successfully inserted into the vein, remove the elastic

ligature, telling the patient at the same time to relax his hold upon the rubber ball, and open the shut-off on the rubber tube. This can all be done in less time than it takes to state it, so that all is practically accomplished simultaneously.

The infusion container should be elevated to about the level of or a little higher than the patient's head. The flow of the fluid should be gradual and continuous; at least twenty minutes being consumed in introducing five ounces. When the fluid is nearly exhausted, shut off the flow with stopcock, gently withdraw the needle and seal up the puncture with a short strip of Z. O. adhesive plaster.

If care is used, a large number of injections may thus be made in the same vein, although I usually alternate, using one arm one time and the other the next. I have given as many as sixty infusions in one vein



Fig. 3. Infusion-needle in ligature removed

within a radius of one inch, and the vein is as good today as it ever was.

A word of warning right here may not be amiss. It is a fact that almost without exception the patient will, after the first few infusions, develop a violent chill in about half an hour. However, though they may shake and take on a ghastly appearance, it need not cause any alarm. It will pass off in about twenty minutes and the patient will feel none the worse for it. When once a tolerance is established for the infusion, the patient will be able to take them every third or fourth day without any inconvenience at all. In fact, they are usually able to take the same at my office and immediately proceed to their usual vocation.

In conclusion, let me say that care in procedure, persistency in the use of the nuclein solution, accurate blood records, and hy-

gienic surroundings will bring results, in victims of tuberculosis, that are astounding to the operator and patient alike.

The Nez Percés Indians

By CHARLES STUART MOODY, M. D., Sandpoint, Idaho

EDITORIAL NOTE.—This is the fifth installment in Dr. Moody's serial about the Nez Percés Indians. It grows in interest. While it is not strictly "medical", it is filled with matter of intense interest to physicians as well as to physicians' wives. The series will be continued for several months. You will want to read every number.

V.

War Breaks Loose

BY a seeming agreement to all the demands of the government the Indians secured the release of their "tu-at" and departed for their several homes. No man knows what was in the minds of the savages when they left Lapwai that pleasant May day. Subsequent events lend color to the view that there was some sort of definite understanding among them as to their future movements. General Howard had peremptorily given them thirty days in which to collect their stock and household goods and return to the Kooskia. That this was manifestly unjust will be conceded by all who are familiar with conditions in the West at that time. It were impossible for the Indians in so short time to round up their widely scattered herds of horses and cattle and drive them some sixty miles, besides fording two broad rivers, then at full tide.

Old settlers, students of the Indians, felt some alarm at the manner in which the savages left the council-grounds. The redskins were too full of joy; they went about the camp laughing and singing as though they had no care on earth. The head men were constantly consulting with the military officers and their agent with regard to their future movements. General Howard came in for an especial share of attention. Had he only known it; the Indians were studying him against a time when a knowledge of his character would be of value to them. That the savages obtained his full measure was evidenced by their attitude toward him within the next fifty days.

Within the required thirty days the Wallowa Indians were back on the Reservation, where they were joined by White Bird and his people, together with malcontents from several bands not affected by the removal order—Indians whose homes were not in the disputed territory, but who sympathized with Joseph. They were back, but they were in full war-paint and armed to the teeth.

The little settlements on the Camas Prairie and White Bird Creek were the first to feel the weight of savage wrath. Several persons who had incurred the enmity of the Indians by acts of injustice fell in a few days.

Only one instance need be cited to show the character of people attacked by the Indians. Samuel Benedict was what is known in the West as a "bootlegger," that is, a man who sells liquor without a license. He was more depraved than the average "bootlegger" in that he did not confine his traffic to white people but sold to Indians as well. Now, no more demoniac creature exists on this earth than a drunken Indian; the stuff unchains all the devil in him, and he becomes totally irresponsible.

One night, in the fall previous to the outbreak of hostilities, Benedict had furnished a band of Indians with liquor until they were half drunk and wholly crazed. It was raining, and after the "bootlegger" had gotten all their money, he turned them out of doors. They hung around for a time, until one of them attempted to regain admission to the house. Benedict seized his rifle and shot the Indian dead. When war broke out it was but natural that Benedict should be one of the first to feel the weight of savage

vengeance. This circumstance may be taken as a fair type of all the crimes committed up to the time the troops took the field.

Chief Joseph counseled against the war. He wished to be allowed to go where and when he chose, he did not recognize the right of the government to place him on any allotted parcel of ground and require him to remain there. He would not fight unless coerced. If, however, the soldiers attempted to interfere with his movements, he would defend his liberties with his life. There are many who sympathize with him in his resolution.

The First Military Attack

After crossing Salmon River, Joseph first encamped on Rocky Canyon Creek, where he was visited by several white people, to whom he spoke freely of his intentions; but afterward he moved his camp to the mouth of the White Bird Creek as being a better location. Here he was attacked by Colonel Perry on June 17, with a force of 90 men. The Indians secreted themselves behind protecting rocks and dealt such destruction into Perry's force that less than half of them staggered back into Mount Idaho to tell the tale. It was a crushing defeat for the soldiers and proved beyond doubt that the Indians would fight.

General Howard now took the field with a force of over 300 and attempted to corral Joseph and drive him on to the Reservation. The wily chief proved difficult to "round up." No sooner did he learn of the approach of Howard, than he retired beyond the Salmon and watched the antics of the whites trying to transport an army across that raging torrent. Some "friendly" Indians showed the soldiers how to cross, and Joseph pulled up and marched down the south side of the river, crossed back at Craig's Ferry (Ford) onto the Camas Prairie again, attacked Perry and Whipple, who had been left with a considerable force to protect the wagon trains, defeated them, and made his way to the Forks of the Kooskia, where he went into camp.

Here he was discovered after several days by Colonel McConville and Major Fenn, in command of two companies of civilians who had become disgusted with the dilatory

methods of Howard and pulled out for themselves. McConville sent word back to Howard of the location of the Indians and urged that general to hasten forward as rapidly as possible. Howard moved by way of Jackson's bridge, a circuitous route, and approached the Indian position from the south side, reaching there on July 11. A pitched battle ensued, in which the Indians proved themselves more than a match for the soldiers, inflicting severe punishment on Howard's troops and finally making their escape across the Kooskia into the dense timbered region surrounding the foot hills of Bitter Roots.

Here they went into camp on nearly the same ground where Lewis and Clark first discovered the Nez Percés. The main band of Indians was joined at this place by Looking Glass and his people, who had been driven from their peaceful homes by the soldiers. The savages held a council and decided to resist until the last Indian was dead.

The Campaign of the Bitter Roots

Then began the long march across the Bitter Roots with Howard and his army in the rear. The retreat from the time the Indians left Weippe until they finally surrendered to Miles in the Bear Paw Mountains in Montana covered over 900 miles and has been likened to the retreat of the Ten Thousand Greeks. Competent experts consider it one of the most masterly military movements in all history.

Chief Joseph, encumbered with a horde of helpless women and children, burdened with all his camp equipment and horses, outdistanced the trained, well-mounted, well-fed troops of the government, turned no less than five times and beat off his pursuers, giving his noncombatants time to place safety between themselves and the enemy.

When the Indians reached the summit of the Bitter Roots, they found the Lo Lo Pass fortified and defended by Captain Rawn with a company of regulars and two companies of Montana volunteers.

Joseph did not wish to fight. He only desired to make his way into the buffalo country to the southeast where he might live undisturbed. To avoid an engagement

the chief sent Looking Glass and Ollicut to confer with Rawn about allowing the Indians to cross through the pass and go on their way. The officer refused to treat with the savages, but upon the promise of the Indians not to molest either life or property in their flight through the Bitter Root Valley, the citizen volunteers insisted that the band be permitted free passage. It was as well that they were allowed to go unmolested, for had a battle been fought there is no doubt but that the little army of soldiers would have been annihilated.

To the everlasting credit of the Indians be it said that in all their long march through the thickly settled Bitter Root Valley they never touched one thing nor injured a single person.

The Indians passed up the Bitter Root Valley, over the crest of the Rocky Mountains, down to the Big Hole and went into camp. They had not heard from Howard for several days and began to think the war was over. They supposed that when Howard reached Rawn's position on the Lo Lo Pass that officer had told him of the agreement and that Howard had turned back. They had yet to learn that the government was not content with stealing their homes but was determined to secure their liberties as well.

The Government's Perfidy

Colonel Gibbon, while Joseph was crossing the mountains, was moving with all speed from his post at Fort Show, by way of Cadotte's Pass and Missoula, to overtake the Indians. Reaching Missoula, he picked up several companies of volunteers, many of whom had been with Rawn and consequently knew the route the Indians had taken. Striking the Indian trail near the summit, the colonel stripped his men to the lightest possible marching order and hurried forward. He discovered the Indians in camp, totally unsuspecting of any danger.

The Surprise at Big Hole Camp

It was night and the troops were disposed in the darkness so as to invest the Indian position. In the chill darkness the soldiers lay on their arms awaiting the dawn. Gradually the gray light crept into the eastern sky, the fog rose on the still water, the tall

pinus on the hillsides stood out in ghostly relief, the white tepees gleamed through the coming light. An Indian rode out of the camp toward the horse herd-grazing in the valley below. He approached a clump of willows that bordered a slough and something in there caught his eye. He paused and peered into the dusk. Throwing his rifle into position he fired, at the same time uttering the war cry. His shot was answered by a volley. The savage tumbled out of his saddle, dead.

The volley was a signal for the charge. The crouching soldiers sprang from their concealment and rushed headlong into the camp, firing as they ran. The Indians, suddenly roused from their slumbers, came tumbling out of the tepees, to be shot down like dogs. It was a frightful scene. Men, women, children ran about in utmost confusion, to be met by a withering carbine fire wherever they went. In less than five minutes the camp was in possession of the soldiers. They seized brands from the smoldering camp fires and began throwing them into the tepees.

The surprise was as complete as unforeseen. The victorious soldiers ran about trampling under foot the dead and the dying Indians, demolishing the tepees and camp outfittings.

But they made the fatal mistake of thinking the Indians were defeated. They little knew the temper of the men with whom they had to deal. Suddenly on the hillside above the camp came a war cry, shrill as the scream of an eagle. It was Looking Glass calling to his braves. Off in another direction came the rally call of White Bird; in another, Joseph's voice could be heard.

Then came from every point a rifle fire so deadly true that with every report a soldier threw up his arms and fell. Inch by inch the maddened savages crept up, pouring down upon the devoted army exposed there in the open such a fire as no human bravery could withstand. The little river valley was becoming a charnel house. Dead and wounded soldiers lay heaped about the bodies of the Indians they had slain only a few minutes before.

"Retreat," "Retreat," "Retreat," rang the bugles, and the troops fell back into the

protection of the woods. Mox Mox and his men, who had run for the horses at the first fire, now returned and, with the women, packed up the camp and trotted off down the valley while the warriors held the soldiers at bay.

All day long Joseph kept Gibbon penned up there in the woods, nor allowed him to move. The soldiers lay behind logs or any protection they could find, and if one showed himself he became the target for a dozen unerring Indian marksmen. All day the beleaguered soldiers lay there under the burning sun, tortured with thirst, watching the river sparkling and dancing maddeningly near, but to attempt to reach it was to court death.

The victorious Indians fired the dry grass in the afternoon and as the flames swept up toward where the soldiers lay, crept behind watching for the appearance of a bluecoat. Brave old Gibbon, though wounded, rallied his men and prepared to make a dash for liberty though it were but a forlorn hope, when by an almost seeming intervention of Providence the wind veered and drove the fire back.

Night mercifully fell and put a stop to the carnage. The Indians still invested the position until their people could place many miles behind them. At midnight they got together, fired one last volley into the woods where the troopers lay, gave the war cry, then rode off.

The Indian's Quest for a Haven of Refuge

For many days the weary little band of Indian fugitives wandered about in the forbidding desert wastes of Montana and eastern Idaho trying to find a place where they might rest. They turned once as though about to enter Jackson's Hole in Wyoming, where they could separate into small bands and defy capture. Evidently thinking better of it, they turned east and camped on the shore of Henry's Lake.

On the same night Howard, who had assumed command of Gibbon's remnant after the battle of the Big Hole, camped on the Camas Meadows eighteen miles distant. The troops felt secure, so secure that they laid aside their clothing and sank into a deep sleep. Night wore on and the coyotes

howled about the camp. The half-asleep sentinel paced his beat, unheeding the insistent yelping of the little prairie-wolves.

The Troops Outwitted by the Indians

Bacon's company of infantry was expected to join the command sometime during the night, and about at 3 o'clock in the morning, the sentry saw them coming down the road marching in regular order—it was Bacon, for Indians never march in military units. Nearer and nearer came the dark mass with the regular swing and marching precision of trained troops. The sentry peered into the gloom, undecided. Surely, no soldier would approach so near to a military camp without halting.

The picket became suspicious. The body of men was now very near. "Halt," called out the guard. Still the body moved on. "Halt, or I fire." once more came the challenge. Still the dark mass came on. Then came a spurt of fire that lit up, not the white faces and blue uniforms of Bacon's command, but the dark, eager faces and Indian dress of Joseph's band of warriors. The rifle fire was answered by a volley from the Indians' rifles, and the stillness of the night was broken by the shrill wavering war whoop of the savages.

All was confusion and consternation in the camp. The men tumbled out of their beds half dressed and groped in the darkness for their arms; horses plunged and reared; wagons were overturned, tents thrown down; the cavalry horses in the meadow below camp were stampeded by Indians who sprang up among them at the first fire and waved blankets. The crouching dark forms poured into the huddled soldiers a galling fire.

But order soon came out of the chaos, the troops formed and returned the fire. The Indians sank back into the darkness from whence they came, taking with them more than 500 horses, thereby leaving the command almost without mounts. When morning broke, enough mounts were mustered to equip two companies. Then the soldiers sat out in pursuit of the fleeing Indians, whom they could see several miles away, among the sand hills, making off with the cavalry horses.

However, with characteristic lack of judgment, the soldiers rode into a trap set for

them by the astute chief. Leaving a portion of his band to keep the captured horses on the move, Chief Joseph took the remainder and stationed them behind rocks on either side of a steep canyon up which the troops were riding. When the soldiers were well within the jaws of the trap, the Indians rose from their concealment and delivered a plunging fire that threw the troopers into confusion. There was nothing to do but retreat, and this they did, followed closely by the savages. When but a short distance from the military camp they ran into Otis with his howitzer battery. An Indian cannot face cannon, so the savages retreated, but were not followed.

Joseph proved in this fight that he could assume the offensive with as great skill as the defensive. The soldiers lost over 300 horses.

The Indians broke camp and entered the Yellowstone Park region. They wandered about for several days, turned north, crossed the Yellowstone and entered the rocky region surrounding Canyon Creek. Here they were attacked by Colonel Sturgis and defeated. This may be said to be the first actual defeat suffered by the Nez Percés from the beginning of the war.

After the battle of Canyon Creek the Indians slipped away in the night and struck for the boundary line, where they hoped to join Sitting Bull, who had sought sanctuary under the British flag a year previous. The Indians despaired of obtaining freedom under the flag so often dedicated to freedom and with such wealth of oratory and such richness of promise.

Northward the weary little band of refugees sped, strewing the trail with dead and dying worn-out horses and discarded camp equipment. Their sole thought was to reach a place where the persistent bluecoats dared not follow. North of the Missouri River lay a semicircular range of hills, the Bear Paw Mountains. Joseph thought if he could reach these hills he would be safe. Their horses were all but famished and the people themselves had almost forgotten the taste of food. With grim determination they toiled on, outdistancing the troops who were following them. Finally they reached the protection of the wooded hills and went into camp. They could go no further—nature refused to carry their exhausted bodies one step nearer the goal.

General Miles Appears

That veteran Indian-fighter, General Miles, was on their track with fresh troops. He struck the trail just where it entered the Bear Paw and without delay attacked the camp. The Indians flew to arms and fought with the ferocity of despair. They made sad havoc among the soldiers, but it was a forlorn hope. Their ammunition was exhausted, their numbers were so thinned that they could not put up the old-time resistance. Joseph realized the futility of longer holding out and came to Miles with an offer to surrender. Miles, always magnanimous, offered, if the Indians would lay down their arms, to return them to their reservation; and had his pleadings been listened to by those in authority, his promise would have been fulfilled.

THE finest thing a hog can think about is a good soft mud-puddle where he can lie in perfect comfort, and undisturbed, when his belly is full, and a trough full of swill with which to fill said belly. With these he is perfectly happy, and all his ambitions are satisfied. If all you want is just to be "happy" go and make a hog of yourself. Get into the slime, fill your slippery hide with the swill of selfishness and live just for yourself and yourself alone.

Uncle 'Zekiel's Nu'ss*

By G. FRANK LYDSTON, M. D.

I aint one of the complainin', sickly kind,
Feller's thet's allus gruntin' an' full o' pain,
Chock full o' misery an' depressed an' blue in mind
To me's like weather thet aint nothin' only rain,
They don't git nowhar nor nothin' done,
But loses out on everythin' from work ter fun.

Of course I've had a crick or so in my ole back,
An' Doc Smith has pulled a tooth or two;
An' once I hopped barefooted on a rusty tack,
An' fer a time the Doc was wond'r'in' whut ter do,
But things like that, with now an' then a hackin'
cough,
Or a spell o' janders in the airy fall
(Fer which Doc gave me calomel an' throwed it off),
As I look back'ard at my life, is all
Thet I kin think of in the way of ills
Thet ever needed any o' Doc's pizen or his pills.

Well, when I'd got past sixty I felt middlin' sound
From most things thet takes a feller from this
sphere
An' puts him out o' biz an' underground;
An' I told Betsy (thet's my wife) she needn't
fear—
She'd never wear them furbelows an' frills
What widders wears to antidote their grief an'
woe
To cheer 'em up from thinkin' of their earthly ills
While waitin' fer the chance ter make another
throw.
But I'd begun ter brag too soon, I swow—
Ther was trubble 'nough a comin' ter kill a cat—
An' I quit braggin', an' haint done any up ter now;
Ner never will no more, ye kin bet yer life on that.

Ye remember how the weather played us tricks
last Spring?
Fust it was cold an' raw an' allus drizzlin'
An' the next day hot enough ter bake most any-
thing,
Jes' fairly set the marrer of yer bones ter sizzlin'?
Well, in one o' them hot spells, like a fool,
Thinkin' spring was sot an' stiddy an' come ter
stay,
I vowed I'd quit my job or keep ole 'Zekiel cool,
An' so I shucked my comforter an' flannels
straight away.
But I come down with lung neumony so gosh-
dinged quick
I hed hardly time ter figger out that I was really
sick.

Betsy 'lowed I'd weakenin' of the head,
Didn't know enough to come in when it rained.
Whut on earth would she do ef I was dead?
I'd talked back, but my lung, gosh hemlock!
how it pained!
Well, Ma sent for ole Doc Smith, an' he hitched up
an' come a kitin'—
An' y'oughter heerd th' ole cuss swear an' tear
around.
If I'd been well you bet thet him an' me'd a been
a fightin',

Fer he was shorely takin' on an' talkin' out o'
bounds
About "durn ole fools who'd ought ter hev
gardeens,"
An' wasn't "half as smart as most any hill o'
beans."

But, all the same, Doc had somethin' serious in his
queer old eyes,
An' when he pounded on my chest an' listened
at my back
He kinder looked as though he'd had a great sur-
prise,
An' his face grew stern an' set an' black.

"Hell! Betsy," sed ol' Doc, still keepin' up his
thumpin',
We've got some work cut out as sure as you're
alive.

Here's a case whar we've got ter get things humpin'.
Ef yer want yer pore ole 'Zekiel to survive;
An' the fust thing is ter heat a poultice pipin' hot
An' slap it on right over this neumony spot.

"Then we've got ter hev some help to take keel of
this yere case,
Ter ease his lungs an' keep his cough an' fever
down,
Ter nu'ss him back ter life an' health an' help him
win the race,
"Fer 'Zekiel wouldn't look so well as some a
wearin' of a crown.
He haint got the voice ter sing them songs the
angels sings,
An' he wouldn't trade them crooked legs fer any
sort o' wings;
An' so we'd better be a tendin' him right sharp
Or he'll be sittin' on a cloud a playin' of a harp."

"All right," sez Ma, her tears a streamin' down,
"I'll send fer my dear ole sister, Marthy Jane—
"Twon't take her long ter make the trip from
town—
She's a born nu'ss, an' she'll soon make 'Zekiel
well again."

Now, I don't remember 'zac'ly all wot passed—
jes' th' expression on Doc's face,
An' how he sort o' spunked right up an' said:
"At sickbeds, nowadays, a feller's wife's relations
hez no place.
Most sick folks wot they've nu'ssed is gathered
to the dead.
I'm not disrespectin' of yer sister, Marthy Jane,
But I've run agin' that sort o' nu'ssin' wunst or
twic't before.
Jest a thinkin' of it ever since hez give me a pain,
An' I reck'n I won't have them Sairy Gamps no
more.

"Now, up in town there's what they call a trainin'
school,
A place they teach gals nu'ssin' o' the sick,
Give 'em lecters an' make 'em live by rule,
Make 'em neat, an' bright, an' mighty quick;
I'll jest send up for one o' them today,
An' set things goin' here with 'Zekiel right away."

*Written for the commencement exercises of the Lakeside
Training School for Nurses, 1910.

Well, you'd ought ter seen the gal he got!
 She wan't more'n 'bout twenty, that's a bet,
 A reg'l'ar little Johnny-on-the-spot.
 An' Betsy's face! Well, I'll bet Doc Smith's
 a laughin' yet.
 Sez she: "See here, Doc, d'ye spose I'll stand fer
 anythin' like that?
 Why, she aint no bigger 'n my ole speckled hen,
 An' I'll vow thet she don't know as much as my
 ole cat.
 She can't fool me the way she kin you men,
 I swow she powders an' she paints—them cheeks
 aint nat'ral red—
 An' I don't like them rats she's wearin' on her head."

But Doc jest sot his teeth, an' lookin' sort o' grim,
 Reckened he'd run his biz 'thout lettin' nobody
 interfere.
 Said them argyments didn't cut no ice with him,
 "Besides, fer all yer argifyin', the gal's already
 here,
 An' here she's goin' ter stay an' stick
 'Slong as yer pore ole husband 'Zekiel's sick."

Then who should put in his oar but my son Bob,
 Thet was jest come home fer holidays from
 school.
 "You're all right, Doc, I'm glad yer on th' job.
 Jest 'cause a gal is young an' purty don't prove
 thet she's a fool.
 My vote's fer her, an' I'll stuff th' ballot box at
 that.
 She's up to snuff an' knows every nu'ssin' stunt,
 I'll bet a hat."

Doc looked at him a minute, sort o' queer,
 An' callin' to the gal said, "Come in an' get ter work,
 my dear."
 Well, I pulled thru the raffle, an' when one day
 Doc said,
 "The crisis happened late last night,"
 I didn't ask him what the crisis was nor what he
 did with it.
 I was so plum' glad to see the shore in sight,
 I didn't care fer any frills or trimmin's, not a bit,
 Jest wanted to breathe the air an' see the critters
 an' the plow agin,
 An' was contented to remain in this dark world o'
 sin.

An' when at last they'd got me up an' dressed,
 A settin' on the porch an' bathin' in the sun,
 I looked at her an' didn't keer a durn ef I never
 convalesced,
 But wondered jest how long the little gal'd stay—

An' hoped, b gosh, she'd never go away.
 Fer I remembered the gentle softness of her hand,
 Jest like a feather, it was so soft an' light.
 I'd seen them cheeks close too an' was glad that
 Bob had sand,
 Had heerd her voice thru all them painful days,
 an' knew the boy wuz right.
 Ther wa'n't any paint nor any powder there;
 An' Betsy shore wuz wrong, them "rats" wuz
 nat'ral hair.

Shore, you kin guess the rest o' my little yarn—
 I fell in love with her. Quite a common endin',
 Well, s'pose I did, I don't care a darn,
 'Twas nat'ral arter all her gentle tendin'
 An' I made up my mind I'd never let her go,
 So I jest reared up an' told the fam'ly so.

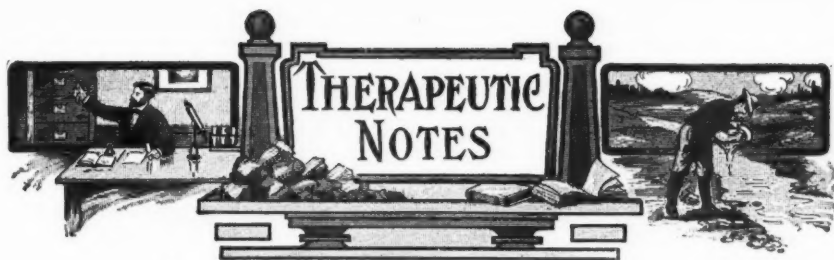
Betsy? Well, she didn't say much to me, fer I wuz
 still amazin' weak,
 But I heerd her sort o' cussin', an' discussin'
 things with Bob,
 An' tellin' wot she thought of a certain ole man's
 cheek,
 An' her 'pinions of thet little nu'ssin' job.

An' Bob said: "Daddy's right; I think she'd orter
 stay,
 The house'd seem unnat'ral now if sh'd leave.
 I don't guess I'll stand fer it, so I'm goin' ter back
 Dad's play,
 An', Ma, I really wouldn't like ter see Dad
 grieve.
 I've hed a talk with her, an' I'm goin' ter have my
 say.
 So, Ma, jest reconcile yerself, she aint never goin'
 'way."

Well, Ben shore backed me up, an' I'm durned glad,
 An' now the good wife's shorely reconciled.
 We kept the nu'ss, she got a bran' new dad,
 An' dear ole Betsy's got a grown-up female
 child.

Doc Smith? Oh, when he heerd the news, his
 eyebrows kinder curved,
 An' fust I'd thought he'd laugh right out,
 An' then he says, slow like: "Well, youth it will be
 served,
 An' I reck'n thet boy knowed jest whut he was
 about.
 An' the gal, well, she might go further an' fare
 much wuss.
 As fer you, 'Zeke, lucky dog, you've stole my
 fav'rit nu'ss."





SERUM TREATMENT OF LOBAR PNEUMONIA

For the past two years and a half, while not forgetting or neglecting elimination, Dr. James H. Duncan (*Canad. Pract. & Rev.*, Oct., 1910) has been using pneumolytic serum in the treatment of lobar pneumonia, and he reports his results in more than twenty cases. From his experiences he is convinced—

(1) That this method is of real and great service in shortening the period of disease—in stopping it before the critical crisis arrives—and in favoring a brief and uneventful convalescence. (2) That serum probably is of slight value, if any, after the sixth day of the disease. (3) He has only once found it necessary to give more than two injections, that is, twenty cubic centimeters of serum, and that one case was so badly complicated with pleurisy that no satisfactory conclusion could be drawn. When he gave the third injection the pleuritic were by far the predominant symptoms and seemed little affected by that dose.

TREATMENT OF BOWEL TROUBLES OF CHILDREN

In an article published in *The Medical Summary* for July, 1910, Dr. W. J. Brymer discusses the management of the bowel troubles of children, and, as to medicinal treatment, he properly holds that no special plan can be laid down, each case having to be managed according to indications. However, two objects must always be kept in view, namely, thoroughly to clean out the intestinal tract, and then to render and keep it as aseptic as possible with appropriate remedies. Dr. Brymer relies upon calomel,

followed by an alkaline purgative, repeated if necessary; a thorough clean-out, then sulphocarbolates sufficient to maintain asepsis. He has had good results from castor oil with a few drops of oil of turpentine if there is much bloating. If there is much pain, paregoric may also be added. When the stools are large and watery, coto bark in full doses gives good results.

Where there is evidence of much sloughing, the author relies upon a mixture of chalk and bismuth, to which enough opium in some form has been added to control pain and keep the patient quiet. The bismuth and chalk mixture as ordinarily dispensed can not be relied upon, because it is coarse and too full of grit, which often acts as an irritant instead of as sedative. If the ingredients cannot be secured finely ground, the doctor should himself triturate them thoroughly; but this preparation is now offered of excellent condition by several firms. In the form of an impalpable powder and suspended in a convenient vehicle, it is a remedy well worth a trial in almost any form of bowel trouble when indicated. It also makes a convenient vehicle in which to administer other remedies.

Bichloride of mercury in small doses is another remedy well worth a trial when there is much sloughing and the odor bad, but it must be given with care. The sulphate of copper also is a fine astringent in some cases.

RATIONAL TREATMENT OF PNEUMONIA

The employment of vaccines in acute pneumonia is discouraged by most physicians because of the risk of adding to the existing toxemia which constitutes the grave danger of the early days of the disease

According to *Folia Therapeutica* (Oct., 1910, p. 89), the rational management of the disease is to concentrate all effort on combating the cardiac catastrophe which this toxemia may produce. The general treatment directed to this end is familiar enough, but when cardiovascular or respiratory failure is heralded by restlessness and sleeplessness, there need be no hesitation in resorting to judicious hypodermic injections of morphine. Many a case of threatened heart failure has been rescued by the rest and calm brought by these means.

However, it is a pitiful travesty of practical medicine to attempt to treat cardiac failure without determining the physical condition of that organ. Now, it is just in pneumonia that this matter is of supreme importance, because the right side of the heart is apt to become distended, and unless this distention is relieved, all efforts at stimulation are liable to be labor lost. This relief can be obtained rapidly by venesection, more leisurely by the application of leeches. In any case, there can be no rational therapeutics of cardiac failure in pneumonia without lessening the burden which so often harasses the heart into a fatal syncope.

We would add the suggestion that unloading the blood into the general circulation with aconitine or veratrine, properly guarded with strychnine and digitalin, will make venesection unnecessary.

THE HYOSCINE, CACTIN, MORPHINE COMBINATION

The Journal of Therapeutics and Dietetics for April, 1910, contains the following editorial on the hyoscine-morphine-cactin hypodermic tablet for producing anesthesia:

"There can be no question but that this compound has a great future before it, both as an anesthetic and an anodyne. Not that the effect of the compound is much greater in both these directions—and especially the former—than that of all the separate ingredients taken singly, and differs in its nature from these to a considerable extent. But its exact indications and contraindications are probably not yet fully worked out, certainly not fully understood by the majority of those who use it."

"It is an anesthetic of great value, but it is not the anesthetic of choice in all cases, any more than is ether, chloroform, or nitrous-oxide gas. It can never be used with advantage, for example, in short and trivial operations, since it takes about six hours to go through the ordeal of inducing anesthesia and recovering from it, including the operation itself. Again, it has a tendency to produce rigidity of the muscular system, instead of the relaxation of ether anesthesia, and this is an unfavorable condition for many operations. In a large class of cases, however, it seems to be the best anesthetic yet discovered.

"The idea which we wish to enforce, as to all the cases we have mentioned, is the importance of definite indications for every drug. The men who study to develop these indications are the pioneers, who prepare the way for the use of the remedies by the everyday practitioner of medicine with success. And it is alike the privilege and the duty of every physician to add his mite to this important work."

THE DEADLY "CONSUMPTION CURE"

The following item relating to "fake consumption cures" and to "quacks" who are preying upon those afflicted with, or believe they have, consumption, taken by *The General Practitioner* from *The St. Louis Times*, shows so clearly the need for a more thorough education in the matter of prevention of fraud, as well as prevention of disease, that it is reproduced in full:

"According to the National Association for the Study and Prevention of Tuberculosis, more than \$15,000,000 annually is spent in 'fake' consumption cures.

"The association also declares this money is spent by the people who least can afford it, and who are 'taken in' by the alluring advertisements of the so-called 'cure.'

"It is the claim of the association that the victims in these instances receive no benefit whatever, but, on the contrary, have their chances for recovery lessened by the harmful 'treatment.'

"Investigations which have been made, according to the association report, show these 'cures' to be divided into three classes.

"In the first are included devices and drugs which are obtainable at a figure varying from ten cents to five dollars.

"The second class includes the 'institutes,' 'professors,' or 'company of doctors,' who for a consideration will guarantee to cure the most stubborn case of tuberculosis by methods of which they are the 'sole proprietors.'

"In the third class, as set forth by the association, are included home-made remedies. In this class are onions, lemons, rattlesnake poison, coal dust, lime dust, pig's blood, milk 'strippings,' and alcohol.

"It is held by the association that the most efficient treatment for the dread disease yet discovered is the open-air, or oxygen, treatment. In all cases a competent physician should be consulted, the association asserts.

"The association also declares that an investigation of the methods pursued by the fake concerns discloses that each year there is spent a sum totalling \$3,000,000 for advertising these 'treatments.'"

THERAPEUTIC APPLICATIONS OF CALCIUM CHLORIDE

In view of the prominent place that has been given to the calcium salts by therapeutists during the past few years it is of interest to refer to a résumé by Dr. Moncany of the therapeutic applications of calcium chloride in *La Clinique*, and noticed in *The Lancet*. Thus it is found that calcium chloride has been employed more particularly in traumatic hemorrhage, in purpura, hemophilia, hemorrhagia, smallpox, and other hemorrhagic diseases, and in hemoptysis, in which its usefulness is a question of divided opinions. It has been given to increase the tonicity of the heart and vessels, in certain forms of headache, neuralgia, pruritus, eczema, and in urticaria. It has also been recommended in obstinate diarrhea, epilepsy, laryngismus stridulus, convulsions, neurasthenia, hysteria, and mental alienation; its results in these cases are considered to be due either to its calmative or to its recalcifying action. Excellent results have been reported in the treatment of chil-

blains, acute edema, serous effusions, edema following vaccination and viper bites. The eruptions that are liable to follow injections of antidiphtheritic serum may in most instances be averted by the administration of a single dose of calcium chloride on the day of the injection and the two following days. The dose of the calcium salt varies according to the quantity of serum given. The author also refers to the use of calcium chloride in albuminuria, nephritis, pneumonia, tuberculosis, pregnancy, coryza, and also in rickets.

The salt has been given by mouth, subcutaneously, and per rectum. Wright found that the hypodermic method tended to cause sloughing. The intravenous method has been condemned on account of the superintention of thrombosis in experiments performed on dogs. Enemata containing calcium chloride are readily absorbed and are well borne by the patient. It is the usual practice to prescribe the calcium salts in small repeated doses, given by the mouth in dilute solutions. It is generally agreed that the treatment should be interrupted after a few days, as the continuous administration of the calcium salts tends to produce results which are just the opposite of those required. It is recommended to omit the treatment every fourth day, allowing a longer interval every eight or ten days.

Calcium chloride must not be given to persons predisposed to calcic retention or atheroma, on account of which it is generally contraindicated in elderly persons, alcoholics, and persons suffering from lead poisoning. The best results will be obtained by cautiously administering the drug by the mouth, in small divided doses, for brief periods, with intervals of cessation from time to time.

Calcium chloride may be combined with opiates in the treatment of hemorrhage. Its intensely disagreeable taste has long militated against its employment. Perhaps the best flavoring agents for masking the bitter saline taste of calcium chloride are cinnamon and peppermint.

Several formulas are given by the author, the simplest of which contains 150 grains of the salt in 10 fluid ounces of water, previously flavored with syrup of

peppermint. Two tablespoonfuls of the mixture are given for a dose.

THE ADMINISTRATION OF DRUGS WITH REGARD TO ABSORPTION AND ELIMINATION

Dr. Wm. Brady (*New York Medical Journal*, January 29, 1910) contributes an important paper on prescribing. He says:

"A practical knowledge of the rapidity of absorption and elimination of drugs is a requisite of successful therapy. It is of equal importance to know whether a dose is best given before a meal, at the end of a meal, or one or two hours after a meal; and to exercise good judgment in selecting the best form and the most effectual manner in which to prescribe the drug.

"An almost unbelievable disregard of the foregoing by the majority of practitioners has led to a regrettable degree of nihilism and consequent loss of confidence on the part of disappointed patients who drift away to the nondrug healers in search of the more promising cure there offered.

"Textbooks on therapeutics, as a rule, have little to say on the subjects of absorption and elimination, and many of them inconsistently fall into the error of advising doses *ter in die* indiscriminately, whether the drug is absorbed and eliminated in one hour or three days; thus, a combination of glonoin with digitalis may be suggested, the dose to be given thrice daily or every four hours, a plan that is about as effective as it would be to tie together the hour and minute hands of a clock. It is not strange, therefore, that we commonly crowd our doses closely together, in urgent cases, heedless of the fact that not the frequency but rather the amount of the dose should be increased to obtain a more pronounced effect."

THE ABSORPTION OF MILK CASEIN FROM THE SKIN AND SUBCUTANEOUS TISSUE

Dr. Karl Roesler (*Wien. Med. Woch.* 1910, No. 20) has experimented with cutaneous and subcutaneous applications of proteids, which are sometimes not well taken by mouth

although they are readily absorbed by the mucous membrane. He used for his experiments the preparation known as sanatogen. Dr. Roesler prepared one-half Gram of sanatogen with water, and for another experiment with vaseline, both cold, in such a manner that a fairly consistent paste resulted. These were spread upon muslin which had been weighed, then the entire poultice was weighed in order to ascertain any possible resulting loss. Then the watery mixture was placed on the right and the vaseline mixture on the left arm of the experimental person, who was young. The arms had been washed with soap and warm water and shaved and cleaned with alcohol and ether. After six hours both compresses were removed, when it was found that of the watery mixture 46 percent had been lost and of the vaseline mixture 20 percent, this much, therefore, having been absorbed by the skin. On examination of the residue, it was found that of the casein in the watery mixture 18.4 percent and of the vaseline mixture 21.2 percent had been absorbed.

In order to ascertain the absorption through the subcutaneous cellular tissues, the author injected 20 cubic centimeters of a 2-percent solution of sanatogen under the skin of the back. (This solution can easily be sterilized.) It was found that after six or seven hours the injected 20 cubic centimeters had been completely absorbed. Pain or other disagreeable sensations had not been observed. It was also found possible to cause the rapid absorption of like preparations in the media as frequently used in massage, such as vaseline, lanolin, etc. This procedure, in the author's opinion, is especially useful in cases where proteids are to be absorbed at certain areas, as it may be desired in treatment with massage.

The author suggests that it would be also interesting to treat neuralgia with sterilized sanatogen solution, and likewise atrophy due to inactivity or prolonged immobilization, which would be treated either by means of massage or by injections, or by both methods. Finally, the method might be of use cosmetically, and the author says that a 10-percent sanatogen mixture has rendered him good service in his own case when his hands were chapped.



Pharmacodynamics of Digitalis According to Contemporary Authors

THE following pharmacodynamic notes, gleaned and extracted from the most recent foreign works, seem to have some interest to American physicians.

The glucosides of digitalis fix themselves chemically very probably upon the protoplasm of the cardiac muscle, on which the remedy acts specifically in reinforcing and prolonging the systolic contractions, hence the resulting elevation of the blood pressure with a diminution of the number of pulsations. The diastole is also influenced, because digitalis diminishes the elastic resistance which the myocardium opposes to the blood column which presses against it; but as soon as this pressure ceases to act the myocardium rapidly resumes its initial volume. The cardiac muscle becomes, therefore, at once more extensible and perfectly elastic. In a word, under the influence of digitalis both the diastolic extension as well as the systolic contraction become amplified. There results from this an augmentation of the volume of blood which passes the aorta in a given unit of time without the absolute force of the myocardium being augmented on that account. The heart works with a greater degree of force than it has at its disposal ordinarily.

Digitalis mobilizes, therefore, the reserve energies of the myocardium. Its action would consequently be wanting upon a heart which is too much degenerated or enfeebled, as for instance the heart of an obese person. This peculiarity might serve in forming a prognosis, and again so much the more must one, on that account, be sure of the product of digitalis to be employed.

The circulation of the blood is enhanced, in all of its relations, by the influence of digitalis; the heart itself is better nourished and its function is notably improved. This is a very important fact, the more so as Plesch has demonstrated that the myocardium receives proportionally ten times more blood than the rest of the organism.

Gottlieb and Magnus admit that digitalis has a vasoconstrictive action. If this be the case, then this medicament would be a bad cardiosthenic, for it would augment peripheral resistances by diminishing the lumen of the small arteries. (Schmiedeberg).

Indications.—Digitalis ought to be given immediately on the appearance of loss of cardiac compensation, as soon as rest alone does not secure a rapid amelioration. Experience has shown, in fact, that digitalis is a specific in cardiac insufficiency, especially on its first appearance.

This medicament is indicated, also, in all cases of blood stasis, whenever we notice an unequal distribution of the blood, such as takes place in the course of pulmonary emphysema, in arteriosclerosis, in renal cirrhosis, or where pleural adhesions exist. But it is in primary heart weakness, especially, that digitalis gives its most splendid results, that is to say, at the first appearance of decompensation in valvular or myocardic affections. Digitalis is necessary in angina pectoris, in cardiac asthma accompanied by cardiac weakness.

In nervous affections of the heart digitalis is not indicated. Neither is it indicated in the tachycardia so frequently observed in the postpartum period. Its action on the

tonus of the tenth nerve pair is, in fact, far from having been demonstrated.

Contraindications.—In cerebral hemorrhage, in recent embolus, and in aneurisms, digitalis is absolutely contraindicated. But, again, it is indicated, remarks Romberg, whenever this contraindication ceases to exist, when the danger of myocardic feebleness is greater than the perils which may result from an augmentation of blood pressure. In cardiac weakness of renal cirrhosis digitalis gives at times very fine results.

The action of digitalis is decided, even when the systolic pressure remains the same. The augmentation of the amplitude of the blood wave (the difference between the systolic pressure and the diastolic pressure) is in fact of greater importance than the elevation of the systolic pressure alone, because it implies an augmentation of the quantity of blood which passes the aorta in a given unit of time. This augmentation is necessarily accompanied by an augmentation of the speed of the blood stream.

The slowing of the pulse in diphtheritic myocarditis and that of typhoid fever, does not constitute a contraindication to the administration of digitalis.

Indications of the action of digitalis.—Diuresis is the most sure evidence that the action of digitalis has been realized. The diminution of the number of pulse beats is a far less certain evidence.

The method of Plesch threw a new light on the action of digitalis in decompensations. The following is an example cited by Kraus at the last meeting of German Naturalists and Physicians at Koenigsberg.

Notes on a case.—Man, age 38 years, attacked with chronic insufficiency of the myocardium, initial insufficiency of the myocardium, and initial insufficiency of muscular origin. Dropsy.

BEFORE TAKING DIGITALIS	AFTER TAKING DIGITALIS
Weight, 82 kg. (180.2 lbs.)	77 kg. (161.7 lbs.)
Respirations, 33 per minute	24 per minute
Pulse, 120 per minute	67 per minute
Blood pressure, 78-120	85-136
Volume of blood passing the aorta per minute, 16.95 liters (17.5 quarts)	10.44 liters (11 quarts)
Heart's work in a minute, 20.71 kg.-meters (212 foot-pounds)	17.50 kg.-meters (125 foot-pounds)
Oxygen used per kg. in a minute 6.42 Ccm.	5.16 Ccm.

The diminution of the body-weight is due to the diuresis. The diminution of the

oxygen used is an indication of a better utilization made of the oxygen carried by the blood into the tissues. Lastly, the air seems to pass better from the lungs into the blood, perhaps on account of the disappearance of the edema from these viscera.

But that which follows most clearly from the above table is that the augmentation of the amplitude goes hand in hand with the great improvement of the general condition and the disappearance of the edema. Now, this disappearance of the edema is contemporaneous with the vital metabolism of the organism. This is a significant fact, and throws a new light on the beneficent action of digitalis, that heroic remedy of which the celebrated Naunyn said, "Without digitalis I could not be a physician."

The official school uses digitalis in the form of its powdered leaves, or their tincture or extract, because these contain the crystallized digitalin and that digitalin whose action, although not identical, is parallel with it.

Dosimetrists (alkalometrists) make also use of heart tonics and combine in one granule both synergic and associative remedies. Such is the compound cardiotonic granule whose components are digitalin, strychnine and iron. This mixture answers all the requirements of a good digitalis-like acting remedy, and should be given in doses of one granule every one, two or three hours until manifest effect. When time is pressing we may associate with it stenol (a mixture of caffeine and theobromine) in the dose of a teaspoonful two to three times a day. In cases of greater urgency, strophanthin may be given in doses of two or three granules; all these at the outset of a digitalis treatment. The action of strophanthin is rapid but transient; it permits us to gain time and to wait without danger till digitalin displays its effects, somewhat later but so much the more powerful and life-saving.

Association of digitalin and atropine.—This association is interesting from the viewpoint of the amplitude of the systole, since atropine augments the number of systoles, from which fact results a multiplied beneficent effect of the digitalin. This idea is so much the more commendable, since atropine is also indirectly diuretic. Yet, practically, I should not dare recommend a parallel

association. Why? Because Cloetta has lately demonstrated that the diastole acts purely passively and is accompanied by a reconstitution of the dynamogenic element of the myocardium. To abridge this restorative phase would be an act of medical improvidence. Let us always remember that back of the disease there is always a patient.—DR. ROBERT TISSOT, in *La Dosimétrie*, Jan., 1911, p. 12.

A CASE OF PSEUDOHERMAPHRODITISM

At a meeting of the Société de Science, Paris, Lucas-Championniere showed the photograph of a bearded female who had been married for twelve years to a man and to whom she gave full satisfaction, first, because she worked like a man, then, because she had no children. Her breasts were extraordinarily developed, and she had a pseudovaginal cul-de-sac which for twelve years had served the purpose of coition perfectly. This woman had a hypospadias. She became noted at fairs as the bearded woman. Later she became very fond of young girls.

Gainard related the history of a widow who, for a long time, had as a companion a person supposed to be a female but who ultimately was recognized as a man, whom she then married.—*Gaz. des Hôpitaux*, 1910, p. 10.

SATISFACTORY DIAGNOSIS

A peasant once came to a recently settled young physician and told him a long story of his complaints. The man was evidently a hypochondriac. The physician after close examination could find no lesion, but unwilling to acknowledge himself ignorant, and because he was a recent arrival, he spoke as follows to the peasant:

"My friend," said he, "I can tell you very exactly what ails you. It is this: the nucleus of your protoplasm has invaded your intercellular substance."

The peasant was visibly affected, and declared that none of the many physicians whom he had consulted told him anything about it, and yet the thing seemed perfectly clear to him now. The physician then pre-

scribed a potion and the innocent peasant went his way.—*Naturwissenschaftliche Vorträge fuer die Gebildeten aller Staende*, von Dr. J. Reinkel.

FRIGUSIN AND BROMOPHOR

Frigusin contains the active agent, diiod-larizinolic acid. It is the first of a new group of medicaments. Applied to the skin it hardens like a strongly adherent varnish and gives off iodine without causing irritation. It is useful in the treatment of chilblains and of small wounds, in place of iodoform collodion. Areas covered with frigusin may be washed with water, cold or hot.

Another member of this group is bromophor, used against itching of the skin and erysipelas.—*Münch. Med. Wochen.*, 1910, 279; in *Pharm. Zentralh.*, 1910, p. 131.

BISMUTH-KAOLIN FOR BURNS

An excellent remedy for the treatment of burns is said, by L. Renner (Merck's "Annual Report," XXII, p. 149), to be a mixture of one part of bismuth subnitrate and two parts of kaolin. The affected part, after being cleansed, is thickly covered with this preparation, and then dressed with gauze and wool. In burns of the first and the second degree healing takes place comparatively rapidly under this dressing. When there is much discharge, the application of the powder must be renewed daily, and, if necessary, partial or entire baths must be ordered. As soon as the scab which forms begins to loosen, borated vaseline should be applied.

EUPNEUMA (ATROPINE METHYL-BROMIDE) FOR ASTHMA AND HAY-FEVER

Eupneuma, a specialty introduced by Ritsert and which has given very good results in asthma when used as a spray, as described by A. A. Friedlaender and other physicians (Merck's "Annual Report," 1908), is a solution of 0.3 Gram (grs. 5) of atropine methylbromide, 2 Grams (grs. 30) of subcutin, and 1 Gram (grs. 15) of anesthesin, in 100 Grams (ozs. 3 1-3) of liquor stramonii, which latter is prepared by a special method.

By means of a suitable atomizer this fluid is applied to the nose in the form of an extremely fine spray. It is claimed to give excellent results in nervous bronchial asthma, in spasmodic asthma, and in hay-fever.

ERGOT IN ATONY OF THE BLADDER

A writer in *Therapeutic Medicine* (Oct., 1910, p. 388) advocates ergot in atony of the bladder, on the assumption that its action is analogous to that on the uterus. Whatever the rationale may be, it is claimed that 10 minims of the fluid extract in one ounce of cinnamon water, three times a day, produces very beneficial results. The same or a somewhat larger dose (15 minims three times a day) may be given in prostatic enlargement accompanied by hematuria.

THE POWER OF RIGHT

"The good right," says the late lamented Dr. Lanssedate, "has no need of resorting to violence, either in words or in acts. An honest will, calm, free, and loyal, has an enormous power. It overcomes more obstacles than does passion, which is always liable to compromise even the best of causes." We approve these noble words. It is by an honest, calm, free, and loyal will that we overcome all the obstacles which may be opposed to dosimetry.—DR. BURGGRAEVE, in *Le Repertoire Universel*, 1878, p. 296.

BACTERIA BECOMING ACCUSTOMED TO ANTISEPTICS

Louis Masson undertook to find out whether a race of bacteria, when becoming accustomed to the action of increasing quantities of an antiseptic substance, presents a certain degree of fixedness.

Experience has shown that the sterilizing dose, measured by the bacterias' accustoming themselves to a given antiseptic, varies for every species in a way that they may be compared. A bacterium, when it adapts itself progressively to noxious doses with increasing amounts, finally arrives at a point of resistance to the antiseptic beyond which it can not pass, and this is followed by a rapid diminution: it at first loses the power

of the acquired resistance, and in some cases may even acquire a sensibility greater than it had at the beginning. In other words, the accustoming of a bacterium to increasing doses of an antiseptic is but a temporary phenomenon; the acquired property is always followed by a return to just the initial resistance. This is an instance of the resistance of species to variation.—*La Médecine Orientale*, No. 3, 1910.

URINE IN CARCINOMA

Drs. Salomon and Sayl presented to the Gesellschaft der Aerzte in Wien, on December 10, 1909, a preliminary report on the characteristic state of the urine in carcinoma-patients. They found in the urine of such patients an increase of the oxyproteine acids amounting to from 2 to 3 1-2 percent in the nitrogen of the urine excreted by them. The relative quantity of the excreted acids in proportion to the nitrogen found in the urine remains constant and is not affected by either the nitrogen of the ingested food nor by starvation, cachexia, exudations, and cell-disintegration. The oxyprotein acids are derivatives from albumin and are very likely polypeptides. The quantity of these acids is far less in the urine of healthy and sick individuals than in the urine of carcinoma patients. It is remarkable that pregnant women also excrete greater quantities of oxyprotein acids with their urine. The spoken-of condition of the urine denotes a specific disturbance in the decomposition of the albumin in carcinoma-patients. Dr. Freund called attention to the investigations made by Toepfer, and said that in his laboratory the conditions mentioned are made use of in the diagnosis of carcinoma.—*Wiener Med. Wochenschr.*, 1909, No. 51.

FIBROLYSIN IN URETHRAL STRICTURES

Trautman says, in the *Dermatologische Zeitung* (12, 8) that experience teaches him that fibrolysin injected intravenously is a preeminent remedy in the treatment of urethral stricture, and facilitates dilations in almost impermeable strictures.—*Muenchen. Med. Wochenschr.*, 1909, p. 2335.



Modernizing Textbooks

OUR editor, in the December number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, calls attention to the fact that many of our medical textbooks, as modern authorities, only endure for a few short months or years. This is undoubtedly true. The changes in ideas, both in medicine and surgery, are so rapid that, even when one follows them in the various journals, he is kept busy.

Of course there are some textbooks which furnish a certain few facts which are down-to-date at all times. For example, no one would ask for a better authority on the alkaloids than an edition of Brunton a dozen or more years old, but in other respects there are many things known at this time which Brunton knew nothing of in the early nineties. Many things which have appeared in the older editions of all our textbooks have been tried and found wanting, despite their popularity for the time being, and the later editions have either only given them passing notice or have dropped them completely.

In the therapeutic world, with the passing of every decade and the issuing of a new pharmacopeia, we find that a new edition of every textbook appears, and if the doctor would be "modern", he must throw out all of his old sources of reference and stock his shelves with the newer editions. It is true that the journals contain matter which is down-to-date at all times, but the average doctor frequently sees but one or two such publications and fails to get all the meat there is in the nut. Both the textbooks and journals need modernizing, the former to a far greater extent.

There should be a medical journal published which would give an epitome of all

the better facts advanced by all of the other journals published, in other words, a journal in which the facts are boiled down and all of the extraneous and worthless matter deleted. Such a journal, if published quarterly, would be modern in every respect.

In order that a textbook be modern at all times, I would suggest that, instead of the publishers furnishing permanently bound books, they adopt the loose-leaf system and that, instead of issuing whole new editions, only such revisions as might be deemed expedient from time to time be furnished. This could easily be done and would tend to keep all textbooks modern at all times. Such books, in their first editions, could be sold outright and the revisions furnished at so much per page or sheet. The covers of such a book should be sufficiently expansive to allow the doctor to retain such old pages as he deemed fit or, as in commercial loose-leaf systems, a transfer binder could be furnished for the out-of-date leaves. An encyclopedia, operating under this system, is extensively advertised and, I understand, is found to be very satisfactory.

I have noted in several new editions of standard textbooks that but comparatively few radical changes have been made, in some only the addition of a few new ideas have appeared. With the loose-leaf system, such new ideas might have been furnished at a much earlier date, and incorporated within the binder, thus furnishing the doctor a new edition without his having to wait for years for a modernized revision. While the initial cost of such a reference book might be slightly above an edition in a permanent binding, to be renewed every five or ten years, the ultimate cost would be

less and the doctor would be assured, at all times, that he has the latest ideas at hand at all times.

Although it is now almost five years since Wright first published his ideas regarding the opsonic theory, it is only recently that any note of this has been made in the textbooks. Ehrlich has, within the past month, introduced his famous "606" remedy for syphilis, but it will probably be either months or years before this is mentioned in the textbooks, all depending upon when new editions are published. If the loose-leaf system of reference books were in vogue, it would be only a matter of a few days, practically speaking, until every publisher would have sheets covering this subject off the presses and ready for distribution to the holders of their textbooks.

The editor says that we should index our journals, and I agree with him in this. But I would ask him if it is not possible that a good many items printed today would not be ready for the literary graveyard a year from today? I believe that they would, and I still contend that, in order that the doctor get the best of everything published, he should have a review, at least every three months, of all the best medical literature of the journals and that his textbooks should be supplied in loose-leaf binders and also furnished with continuous revision sheets of the subject-matter, daily if, on occasion, it be thought necessary.

There is not a day but that someone comes forward with some new idea, and not infrequently, as has been clearly shown, such ideas are fallacious, at times in the extreme. Such being the case, we must cull our journals carefully, accepting only that which has merit. As a rule, the fallacy of ideas is shown within a short time after they have been advanced, and a quarterly review of all of the medical journals would bring out only the points of real worth ignoring the reverse.

If the editor will give us the loose-leaf textbook and the quarterly review of all of the journals, he will have solved the problem of keeping medical literature at the modern point at all times.

GEORGE L. SERVOS.

Fairview, Nev.

[The first suggestion of Dr. Servoss is already pretty well provided for in the abstract department of a few of the larger weeklies, but particularly in *The Medical Review of Reviews* of New York City, now edited and owned by Dr. W. J. Robinson, 12 Mt. Morris Park, West. The loose-leaf idea has a "germ" in it and deserves consideration and expansion.—Ed.]

PIN IT ON THE OFFICE DOOR

Forget your kids, forget your wife,
Forget the days you rocked her,
But while forgetting don't forget
The debt you owe the Doctor.

A. D. HARD.

Marshall, Minn.

ARSENOBENZOL AND THE QUACKS

It is hardly a matter of surprise that a discovery like that of arsenobenzol as an efficient remedy for spirochetal diseases should be eagerly seized upon by the unscrupulous advertising practitioner and should have been "worked" for all there is in it for the exploitation of the unwary patient and for the greater good of the quack's pocket-book.

Even before arsenobenzol was put on the market, advertising quacks in Germany offered to treat syphilitics with the remedy and did inject some sort of a medicine (atoxyl, we suspect) which they claimed to be the famous "606" and for the administration of which they charged enormous fees.

Since Ehrlich's new remedy has been placed on the American market, the Sunday papers of New York, Boston and Chicago, to our certain knowledge, and we presume, those of other cities, have carried an advertisement by a concern in New York doing business under the name of "The '606' Laboratories," and offering to supply salvarsan, or "606" upon receipt of \$30.00, in a plain, unmarked package, which is to contain the necessary dose, with simple directions.

Not only do these people pretend to supply the new remedy without any authorization whatever (the New York agents having denied, on inquiry, that they have supplied these "laboratories") but they also make the most lying and misleading statements and

claims for the remedy. For instance, they say: "Salvarsan can be taken in the privacy of the home." [True, if a trained physician can be found to give it.—Ed.] "It contains no mercury or iodides." [True.—Ed.] "No matter what stage the disease is in, or how many months or years' standing, one dose cures permanently." [That's a lie.—Ed.]

"606"

Prof. Dr. P. Ehrlich's Cure for
BLOOD POISON
NOW ON SALE
All Symptoms Removed in 2 Days
ONE DOSE CURES

If you have aching bones, rash, sugar-colored spots, swollen glands, tired, headache, falling hair, etc., or notice where located but how dirty, even if they have been for months, you will find relief in 24 hours. If you are afflicted or have been afflicted by syphilis, gonorrhea, etc., you will find relief in 24 hours. If you are afflicted or have been afflicted by syphilis, gonorrhea, etc., you will find relief in 24 hours.

No. 606 was perfected after 400 experiments by Prof. Dr. P. Ehrlich (who is Prof. Emeritus at the University of Berlin) and his wife, Dr. Ehrlich, during 10 years of the most exhaustive experiments in the history of medicine. It is the only remedy that has been found to be really effective in the treatment of blood poisoning.

Blood poison is usually preventable. It can be contracted by direct contact with some object where the virus has been deposited. Any part of the surface of the body where an abrasion may exist (scratching the scalp and the face, etc.) is liable to become infected. It can also be contracted by the virus of blood poison. Thus it is contracted in many instances by the virus of blood poison. It is contracted in many instances by the virus of blood poison. It is contracted in many instances by the virus of blood poison.

A single dose of Ehrlich's discovery has been found to be the solution for the blood poison. It has been found to be the solution for the blood poison. It has been found to be the solution for the blood poison. It has been found to be the solution for the blood poison. It has been found to be the solution for the blood poison.

To obtain the patient that he must be the earliest remedy. Prof. Dr. Ehrlich controls the manufacture of the remedy in Germany and every package is tested under his personal supervision and each and every one is guaranteed to be the most effective. It is the only remedy that has been found to be really effective in the treatment of blood poisoning.

P. S. Owing to the very limited supply of Salvarsan, it is not expected that this announcement will again appear for six months.

"Remember, all symptoms disappear in two days." [That's another lie.—Ed.] "After thirty days you may take the Wassermann blood test [They refer to this test as "infallible" in their advertisement, and it is by no means infallible.—Ed.] and if the report shows that there is even a trace of the disease left, your money will be refunded."

If these gentry would live up to their promise to refund the money in all cases where thirty days after treatment, the Wassermann test shows even a trace of the disease, they will have to make such a refund in at least 50 percent of their cases, probably in far more. In legitimate clinical work the Wassermann frequently did not become

negative until the fifth or sixth week, and then only after a second or even a third injection.

It is to be hoped that physicians will keep their eyes open, and will guard against such fraudulent advertisements and also warn their patients against them. We doubt very much whether these people have received any supply of "606," either from the New York agents or from Prof. Ehrlich direct. Their claims and their unscientific language stamps them at once as charlatans, and ignorant quacks, and shows that they do not have the least conception of the nature of syphilis, its diagnosis by the Wassermann test, and its cure.

In this connection it may be interesting to note that a St. Louis advertising concern, the Salvar Medicine Co., has issued a "Trade-Mark Warning" (see *The National Druggist* for January), threatening to enjoin the use of the word "salvarsan" by the American promoters of Ehrlich's new remedy, dioxidiamidoarsenobenzol, or "606."

A QUESTION OF FEES, AND "606"

I have been told that recently one of the most prominent surgeons of Chicago, a shining and eminent light in the profession, charged a fee of five hundred dollars for administering a dose of Ehrlich's new remedy for syphilis, familiarly called "606". The same gentleman (although the subject of genitourinary diseases is entirely out of his line) has improved his chances for publicity by rushing into print in regard to this remedy which, it seems to me, might properly be left to the investigations of genitourinary specialists for a considerable time to come.

I have been wondering just what it was that made this injection of "606" worth five hundred dollars, when "lesser lights" who may be more properly called to administer the remedy are content with a small fraction of this fee. Was it the exaltation of the august name that gave a particular guarantee of efficiency, or was it the seal of approval impressed by the august professional hands upon the humble tool? Which was the medium of treatment? Truly, Dr. Ehrlich should feel flattered that the results of his laborious and painstaking

studies, which have given him world-wide fame in spite of his personal modesty and reticence, have found favor in the eyes of the august surgeon of the "windy city."

I am thinking what a howl would go up from among the elect and the leaders (save the mark!) among the Chicago profession if anybody else should dare to charge such a fee. The accusation of commercialism and quackery and of unprofessional conduct would be heralded against the unfortunate offender. Really, Mr. Editor, the spectacle of the high and mighty in the land is edifying, and in its results it would be worth emulating if the following of such an illustrious example were not found to be visited upon the luckless followers with such dire punishment. Truly, it is a funny world.

"BLANK."

HOE OUT YOUR ROW

If the landscape's lookin' lonesome,
And the earth is cold and bare,
With a skift o' snow upon it,
And a chill is in the air;
If your outlook's rather gloomy,
And a doubt is in your mind,
As to what the future's bringin'
To the plans you have outlined.

If your life seems sad and cheerless,
And your work is hard to do,
If your job is rather irksome,
And you sigh for something new;
Just remember that you're only
One among the millions 'round,
Workin' on the same old problems,
And a worse lot might be found.

That same landscape's goin' to change soon,
That same sky will soon be clear,
When the sun comes out from hidin',
That cold snow will disappear.
Down below the crust, the grass is
Just awakin' from its nap,
And the little buds are hungry,
For their springtime feast of sap.

When the seasons in their routine,
Just turn over in their sleep,
Yawn and stretch, then wake and hustle,
You can see the verdure creep
Over all that bare brown landscape,
'Till the world laughs loud and long,
While the blossoms burst with fragrance,
And the birds take up the song.

Then's the time for you to wake up,
Learn a lesson of your own,
And remember that the harvest
Must be planted 'fore it's grown;
Make the best of what's before you,
Grit and push are bound to show,

And until things come 'round your way,
Keep on hoein' not your row.

HOMER CLARK BENNETT.

Lima, O.

THE METRIC SYSTEM AND "GOOD, PLAIN, EVERY-DAY ENGLISH"

In many articles contributed to medical journals, I find the author of the article, either through thoughtlessness or in order to impress the reader with his profound knowledge, has to a certain extent defeated his purpose. He has (like Dr. Waugh in some of his articles in *CLINICAL MEDICINE*) filled his article full of references to milligrams which the average physician does not understand. The average doctor does not think in milligrams. Gm. .0005 does not convey much to his mind, but 1-134 grain does, because it is the system he is accustomed to. The same thing holds true in regard to many foreign words and phrases. They are to him as a blank. To be sure he can look up these things, but even then he has to change them into English before he can comprehend them.

Who can realize, for instance, the amount of 10,000 francs until he changes it into American money? If you say \$2000 he at once comprehends your meaning without any figuring. If you say 1-25 of an inch we know what you mean. What we want is good, plain, every-day English, to which we are accustomed and which we can understand without the aid of a dictionary or scale of equivalents at our side.

I have no objection to an author using the metric scale, but he should realize that the average reader is not familiar with it except in the English equivalent. I am somewhat familiar with it, but I cannot think in the metric system. I have to first convert it into the English equivalent before I can realize what the dose is, or its size.

Now don't you think it would be a good thing to speak about this matter editorially? I have spoken to many doctors about it and they all condemn the double standard. They are at sea with the metric system. They cannot use it and do not wish to be bothered with it.

L. H. JONES.

Wall Lake, Ia.

[Doctor, I am glad you brought this up, as I think it is a matter of a good deal of importance. I agree with you with regard to the interpolation of foreign words and phrases into articles intended for the general reader. It is rare indeed that the writer cannot express his thoughts in English, and far more forcibly than he can in a foreign language—at least so far as his audience is concerned. I fear that most of the quotations are begotten in conscious pride of real or fancied erudition. What pleases *us* most is the crisp, straightforward, straight-to-the-point statement of fact—and in words of one or few syllables. Brethren, avoid the *appearance* of wisdom. Get down to brass tacks!]

But as to the metric system, I can not agree with the brother—not exactly. I *do* think it is wise to print the metric terms with English equivalents; but I also think it is important that physicians should become thoroughly familiar with metric weights and measures. This system has been accepted by scientific men everywhere, primarily on account of its *simplicity*. Any intelligent man can master it by two or three hours of study, and once mastered it is easy to learn to *think* in it. All original scientific investigators employ it; it is used in more and more of the textbooks, and will eventually be employed by all; it is in common use in practically every civilized land in the world except England and the United States; you can not go to a medical or other scientific society meeting without hearing it constantly. Finally, the dosimetric idea of measured dosage is fundamentally metric, and that (even though you may not realize it) is one of the factors making for its popularity and strength.

No, Brother Doctor, I wouldn't "knock" the metric system. I would learn it and use it—use it at every opportunity.—ED.]

A NOVEL CAUSE OF DEATH

One of our readers sends us the following, clipped from the local paper:

James O'Connell received a letter from his cousin, William O'Connell, sheriff of Kalespell, Montana, stating that a sister of his died of Suprarenal Capsules, or Addison disease in South Dakota.

Respectfully referred to Dr. Wilbur of the Census Bureau for proper classification.

A CASE OF SPASMODIC CROUP

Here is a little experience that I had recently with spasmodic croup.

I was called to see a little boy four years of age who had been sick for nearly a week with spasmodic croup. Another physician had seen the patient twice before I was called, and as the disease had been running for a week I thought something else must be the cause of so long a sickness. I gave him a thorough examination and found no elevation of pulse, no temperature, but difficult breathing with the most strident cough that I had ever heard. I asked them if he breathed so all the time and they said, "No, only at night."

I thought, now is my time to try to "brown iodide of lime," of which I had a fresh supply. With all the assurance I am capable of giving, I assured the family that croup was an easy disease to cure and told them to watch the magical effect of the medicine, which would do wonders within a few hours. After administering a mild cathartic I told them to give the brown iodide every thirty minutes until relieved. I placed 10 grains in two-thirds of a cup of water and ordered teaspoonful doses of the mixture.

After that I came home, driving about ten miles through a very cold storm. In forty-eight hours they again sent for me and said that the boy was dying. I arose from my warm bed and went that cold ten miles as fast as my horse could carry me, only to find the boy almost lifeless from strangulation. I immediately saw that something had to be done, and that quickly, too, to save the boy's life. In my case I had some fluid extract of lobelia of which I gave him five drops. I then steamed him, under a blanket, with vinegar and water, which relieved him somewhat in a short time.

I came home, telling the family to continue giving two drops of the lobelia every hour, until the boy was relieved entirely, and that did the business. All he required was relaxation. There was only a slight return the following night of the difficult

breathing which was quickly relieved with the lobelia.

I write this only to show that a doctor must be full of other resources if one thing should happen to fail him in time of need.

R. K. PALMERTON.

Cannonsville, N. Y.

[Surely! If the case was purely neurotic, as seems from the description, it was not calx iodata that was needed but an antispasmodic; and he got a mighty good one in lobelia.—ED.]

BISMUTH EMULSION USED IN A FISTULA, FOLLOWING FRACTURE

On Oct. 20, 1910, I was called to see Mr. B., living six miles in the country, who had been injured while pulling stumps with a block and tackle. I found the patient with a wound in the left shoulder, resembling a gunshot wound. On examination of the clothing it appeared that some missile had gone through it, carrying quite an amount of material into the body. I probed the wound but could not locate anything. As it was evening, I put on a temporary dressing and resolved to wait until morning before investigating further.

The next morning, having secured proper assistance, an anesthetic was given and a T-shaped incision made about the center of the scapula, just above its spinous process, following the course of the wound upward and inward. After about thirty minutes of exploration a portion of a link of a chain, about 9-16 inch in diameter, was found imbedded in the first dorsal vertebra. In entering it had fractured the first rib at the tuberosity, and also the tubercle of the vertebra.

On removing the piece of iron the fractures were found to be comminuted, small pieces of bone were taken out, and, also, fragments of clothing. The wound was then cleaned and packed, drainage was made about five inches below the seat of injury and to the left of the spine about three inches. The temperature was 102° F., pulse 50 and intermittent, respiration 17. I gave digitalis, nux vomica and echinacea every two hours.

October 24, the temperature was 98.4° F., pulse 76, respiration 17. The packing having been removed, two drainage tubes were inserted. October 25, the temperature was 98.2° F., pulse 68, respiration 18, and these remained normal during treatment.

I now had to deal with a deep suppurating wound, which was dressed every day; although the process of repair had been considerable, suppuration was persistent.

On November 11 I prepared a paste of bismuth subnitrate as suggested by Beck, mixing one part of bismuth with two parts of petrolatum. After removing the drainage, and heating the emulsion in a water bath, I injected the entire cavity with the emulsion, put on a compress and roller bandage, and left it forty-eight hours. November 13, on redressing, I found that suppuration had diminished. After irrigating I injected the emulsion as before. November 15, on removing the dressing, I found very little pus, and at the following dressing none at all. The wound was still open and was dressed every other day, using only sterilized water. In one week it was entirely healed.

I believe had the bismuth emulsion been resorted to earlier the repair would have been much more rapid. We must thank Dr. Emil G. Beck of Chicago for the suggestion.

G. L. B. ROUNSEVILLE.

Milladore, Wis.

[The suggestion of the utility of the bismuth-vaseline paste was first made by Dr. Emil G. Beck of Chicago, in *The Illinois Medical Journal*, April, 1908. A splendid article, telling of the application of this method to the treatment of rectal fistulas, was contributed by Dr. J. Rawson Pennington of Chicago, to the January, 1909, number of *CLINICAL MEDICINE*. For details concerning technic we refer our readers to that article. The method is applicable in almost any condition where there is a pus-discharging fistula that refuses to heal. Dr. Beck has had exceedingly brilliant results in the treatment of Pott's disease, of which the psoas abscess is one of the most menacing complications.

It is important that the paste be carefully prepared, under aseptic conditions. The formula employed by Dr. Rounseville is generally applicable, though it may be made a little stiffer, if so desired, by the addition of about 5 percent of white wax. In some cases Beck adds one percent of formalin. Prior to using the paste the fistula should be dried out carefully and packed with gauze, which should be removed just before injecting.

In all these septic cases the physician should not forget that we have two remedies which actively combat the suppurating process. These are calcium sulphide and echinacea. Give them always, and in large doses. Cases presenting these fistulous and abscess cavities, which resist treatment, are good ones for treatment with autogenous vaccines, made by cultivating the germs present in the infected tract, these germs (dead) to be injected into the body of the patient, the purpose being to raise the opsonic power of the blood, according to the theory of Wright. These vaccines are extensively used in veterinary practice, with fine success; they should be tried more frequently in human medicine. The principal objection is the price, since a special vaccine is required for each case treated. However, the laboratory charges are not usually high.—ED.]

SUCCESSFUL HANDLING OF PNEUMONIA

I have been in general practice thirty-odd years and, of course, in that time have seen a good many cases of pneumonia. In the early years the cases of pulmonary congestion that I saw (and we didn't know anything about bacteremia then, and had to depend on *clinical* signs and symptoms), with scarcely an exception, went on to the classical course of the disease. In the last fifteen years less than 10 percent of the cases of pulmonary congestion to which I am called in the *early congestive stage* go on to develop the classical sequence or stages of pneumonia.

Now, do I suppose that we have developed a pneumonia that *naturally* tends to abortion? Nay, nay, Pauline! the death-records don't read that way. Pneumonia

has climbed to the terrible point of being called "Captain of the men of Death."

Do I suppose that I have lost my ability to diagnose pneumonia in its congestive stage? No, I really think that I am a better diagnostician than I was thirty years ago. So I am forced to the belief that I have several hundred reasons (being the congestive pulmonary cases *not* going on to fully developed pneumonia) for believing that pneumonia can be aborted therapeutically.

My own method of treatment is as follows: Clean out with calomel, podophyllin and salines till thoroughly clean, and keep up the saline laxative every morning. Rub the chest well with a mixture of oil of turpentine, 25 percent to 50 percent, and melted lard, and apply a cotton jacket. After cleaning out, start with the triple sulphocarbolates, 60 to 90 grains daily, and keep this up till convalescence is assured. If the sulphocarbolates (given always in solution) do not keep flatus down, I add small doses of oil of turpentine occasionally. I always watch the gastrointestinal tract very closely in pneumonia, as I consider it the critical ground in the battle. I do not believe we should have as many failing hearts in pneumonia if the blood was not previously poisoned by intestinal toxins.

In the onset I occasionally give a dose or two of morphine for chest pain, but later depend upon bryonin and hyoscyamine. For equalizing the circulation and controlling pyrexia, I depend on the defervescent compound (aconitine, veratrine and digitalin), changing its proportions as indicated by systemic conditions. Unless called for I do not give strychnine early in the attack, but if the case be asthenic I use the dosimetric trinity with strychnine arsenate in place of the veratrine of the defervescent compound. These are always given in solution and at intervals of one-quarter to one-half hour, then hourly, or less often, as temperature comes down and circulation is controlled.

I keep up the administration of nuclein throughout the attack, giving it if necessary, hypodermically, in doses of 10 to 20 minims at the start, followed by the same dose, given on the tongue, every four to six hours.

Where prostration is great at the start I give quinine, 3 grains, and capsicum, 1 to 2 grains, every two hours for a few doses. This and the nuclein to boost hyperleukocytosis.

I give plenty of pure water, but not cold water, throughout the attack, in order to promote elimination through skin and kidneys. I feed with small meals of rich, concentrated food at short intervals, increasing quantity and lengthening intervals as convalescence comes on. Sleep and rest *must be had* and I secure it by proper medication if necessary.

Cough is controlled if irritating and ineffectual, by heroin hydrochloride, in 1-24 to 1-12-grain dosage. Later, if the secretion is not raised freely and easily, I give sanguinarine nitrate. In old people where this latter condition occurs, I use a great deal of calcium sulphide and always with good effect.

I keep the patient in bed until I feel sure that danger of cardiac failure is over and usually prescribe the arsenates of iron, quinine and strychnine, with nuclein, to promote convalescence. Great care is taken to keep the environmental and personal hygiene of the patient good throughout the attack and afterwards. Many times proper attention to these conditions will turn the scale of the fight for betterment.

W. C. Post.

Maquoketa, Ia.

[Pneumonia, though much discussed, is a subject in which we are always interested. Dr. Post's methods are splendid. No wonder that he has such fine success. I want to add just one suggestion: *Iodine* seems to have a specifically "unfriendly feeling" for the pneumococcus. Give it freely.—ED.]

EVERY NUMBER WORTH THE SUBSCRIPTION PRICE

Enclosed you will find check for \$2.00 for renewal to CLINICAL MEDICINE. I think without a question it is the best all-around medical journal there is published. The only trouble with me relative to it is that I want to read it all and do not have time to do so, but there is no number but

what is worth far more than the subscription price for the entire year.

LEVI D. JOHNSON.

Whittier, Cal.

DYSENTERY, PNEUMONIA AND HOMEOPATHY

Agreeable to your request in CLINICAL MEDICINE, I give you a bit of my treatment in a few familiar diseases, namely, hydrodiarrhea and dysentery. I remark without egotism, simply as a matter of fact, that in forty-five years of practice since the close of the War I have never failed to cure the above-mentioned diseases, and that with very simple remedies. Only within the past ten days did I cure two patients who were much alarmed about themselves because the discharges were so profuse and watery and accompanied with much pain. I treated them as I have all my cases of the kind ever since 1865.

I use the third trituration of "mercurius solubilis"—a small powder dry on the tongue every three hours till the discharges are natural—and a combination tablet of "chamomilla and colocynth" after each movement of the bowels. I have never seen a case so bad that this would not relieve and cure in short order. I used to treat rivermen in Wisconsin in the same way. They wondered how such small doses could effect such cures.

For dysentery I use "mercurius corrosivus," third trituration, every three hours, and also an enema of milk, molasses and water, equal parts, with a few drops of laudanum for the pain and straining, added as often as needed till the pain and straining cease (not oftener than once in three hours). I further give the "chamomilla and colocynth" tablet, one after each movement.

I will cite only two cases of dysentery because of their being the worst in my experience.

Thirty years ago, in Wisconsin, I was called to see three girls in one family who had been passing nothing but clear blood for three days, and one they had given up to die before they called me. I put all three on the same treatment, viz., mercurius corrosivus, third trituration, every three hours, and hop tea for quieting; beside the enema

of milk, molasses, water, and laudanum every three hours. They were all healed and well inside of fifteen days.

When in Lima, New York, where I practised six years (from 1875 to 1881), I was called to see a gentleman who had been resorting at Hemlock Lake for two weeks and it seems had been subject to dysentery, and he told me, nearly died with it twice in the city of Rochester one and two years before. As I entered his room, he said to me, "I do not believe you can help me, but they insisted on sending for you;" to which I replied: "My dear sir, I shall have you on your feet in less than a week." "Well, you'll be a good one if you do," was his comment. I gave the same treatment as in the case of all dysenteric patients, and sure enough, the gentleman went on his way home within one week, happy, and money and thanks were free as water. I give you this bit of experience as facts that cannot be gainsaid.

There are two other diseases which I have been remarkably successful in treating, to wit, pneumonia and pleurisy with pneumonia. I have never lost a patient with either disease although I have had some tough ones. I recall particularly the case of a blacksmith, thirty-five years ago, down with "pleuropneumonia," who thought his end had come.

I applied witchhazel compresses on the chest, covered with dry flannel, changing only when dry. I added a teaspoonful of laudanum to the solution of witchhazel, and kept on this compress as long as the inflammation and pain continued. Internally I gave tincture of bryonia, a few drops in a cup of water for the pain or dryness of the linings of the lung or pleura. For the inflammation and fever I gave the tinctures of *veratrum viride*, *aconite*, and *gelsemium*, a few drops in a cup of water; one drug at a time, as judgment dictated according to conditions. *Phosphorus*, 3d, and *bryonia*, 3d, and tincture of *ipsecac* were always my sheet-anchors for cough. These were used. The patient made a prompt recovery.

I read of a great many deaths from pneumonia, but cannot understand why there should be so many were they properly treated.

Now allow me to say, I believe in the alka'oidal and similar remedies, when used intelligently. As a rule, medicines are used too promiscuously, I believe, too many remedies in any given case and too heavy doses. I am using hyoscine-morphine with fine success.

CLINTON D. WOODRUFF.

Reed City, Mich.

[I have many reports testifying to the value of corrosive sublimate in small doses, in the treatment of acute intestinal inflammation. The good seems to be lost if the doses are raised to the irritating point. Others besides homeopaths assert that colocythin in minute doses is effective, especially when such attacks are attended with acute cutting pains. It is always a case for trial—we do not base beliefs on theory when we can apply the clinical tests. Say any and everything that may give us improved methods of curing the sick.—Ed.]

"MEDICAL CHAOS AND CRIME"

A book that has been widely exploited through the lay press, and made the text for violent criticisms of the medical profession, as well as various animadversions on the part of portions of the profession against other portions, is Dr. Norman Barnesby's "Medical Chaos and Crime," which is offered for sale to the lay public. As soon as we saw the book and learned its character we said that it would do harm. We are borne out in this criticism by Dr. Wm. J. Robinson's scathing criticism in *The Critic and Guide*, some striking paragraphs from which we reprint herewith:

The author accuses the medical profession of cupidity, cruelty, brutality, ignorance, malpractice, sexual perversion, etc., and gives illustrative examples. As neither the names of those who are supposed to have committed the atrocities nor the places where the atrocities are supposed to have taken place, are given, we have no means of judging as to whether or not the author tells the truth. Maybe those alleged facts are creations of his imagination, or maybe he was too credulous, and in his desire to gather damaging testimony, lent too ready an ear to the stories of not always reliable disgruntled patients.

But let us admit that every statement in the book is true, that all the cases of cupidity, commercialism, ignorance and malpractice are actual facts; let us assume that the author has perverted nothing,

that he himself is honest and sincere and believes in the truth of everything he has written. Still the book is a lie, for it produces the effect of a lie. If a truth is wrongly focused it becomes distorted and producing the effect of a lie, it is a lie, as Maeterlinck says.

In every trade, in every profession, in every line of human activity, there will be found some men without a conscience, and if the isolated misdeeds of such men were gathered together and presented as the common practices of the profession or trade, that profession or trade would appear monstrous. For every case of commercialism, for every case of indifference, for every case of dishonesty exhibited by a member of the medical profession we could show ten cases of the noblest altruism, of the deepest concern, of the most wonderful self-forgetfulness and devotion to the patient's interest. And as it would not be right to claim that the entire medical profession consists of noble altruists, who never have any other thought but the patients' interests—though there are many such—so it is wrong, very wrong, to claim or to give the impression that the entire profession consists of commercialists and grafters, because a few of its members are such.

To the question: Will the book accomplish some good? I must answer emphatically in the negative. The medical profession certainly did not need it, for the most effective parts of the book, the most scathing denunciations of the abuses existing in our profession, are taken from prominent medical journals, which is proof positive that we ourselves recognise the evils that exist in our midst, and that we neither condone them nor gloss over them. We ourselves are the severest judges of our shortcomings, and both on the platform and in the medical press we do not hesitate to expose them and to lash them. And we need no outside critics.

As to the public, I have not the slightest hesitation in saying that with the exception of two chapters—on the quack and on anti-vivisection—which are very good, the effect on it will be extremely pernicious, and nothing but pernicious. If I could think of any good the book might do I would try to weigh it against its evil influence and find which outweighs the other. But I cannot. I see nothing but evil from a wide circulation of the book. We are all familiar with the layman's tendency to generalization. After reading the book he will become convinced that all physicians are grafters, all surgeons cruel butchers, that there are no high-minded honorable men among the medical profession, and that their sole object is to make as much money out of the patient as possible. What will be the natural result? When a person gets sick, he or she will delay treatment as long as possible, if in need of operation he or she will delay consulting a surgeon until the case has become aggravated or incurable. And altogether by assuming a doubting or antagonistic attitude toward the attending physician or surgeon, the patient will in reality weaken his own chances of recovery. So what is gained by it?

No, from whatever point I look at it, I can find no *raison d'être* for Dr. Barnesby's work, except the vulgar one of a desire to make money from the sale of a sensational book.

HOW DO DRUGS ACT?

What is it in opium and its alkaloid that produce the opium habit? Is there any-

thing? Is not the habit produced by the drug mechanically, altering the normal anatomical and physiological conditions of the human body?

This is a very interesting study. Let us pursue it a little farther.

The whole subject comes up under the head of "How do drugs act?" Some close observer and acute reasoner has said that all actions and reactions are brought about by "contact of surfaces," and drugs are no exceptions to this rule. The organism presents a surface or surfaces to which the irritating facets or surfaces of the drugs are applied and from the reaction thus caused pharmacologic results follow.

Drugs are not vitalized entities, endowed with power to act. There is but one force at work—the life-giving principle of the organism, the *vis medicatrix nature*.

When a drug is introduced into the human system through the stomach, veins or in any other manner, the system or organism immediately begins to do something with it. And if let alone, to do the proper thing—it may be a bullet, a cinder or a grain of opium—the great human organism proceeds to take proper care of it. No difference what is done, the organism does it; hence we might as well say "food action," "cinder action," "bullet action," as to say "drug action."

Thus the question arises, If there is no such a thing as "drug action," why does our economy react differently toward different drugs? This question is dead easy to answer. Each drug is individual and because of this individuality nature attends to each differently. She takes care of a cinder in one way and mercury in another; of a bullet in one way and strychnine in another. To come down to a little chemistry, nature handles $C_{17}H_{19}NO_3$ one way and $C_{17}H_{19}NO_5$ in another. But it appears that she should handle morphine ($C_{17}H_{19}NO_3$) and piperine ($C_{17}H_{19}NO_3$) just alike. Yet she doesn't. Why? Haven't they the same chemical formula? Yes. Then what is the matter? Put on your chemical spy-glasses and look a little below the surface and you will see what's the matter.

If you examine the structural formula you will find that while they both read C_4H_{10} ,

they are not alike so far as the arrangement of atoms is concerned. So, when introduced into the human body, nature doesn't get hold of their "horns" in the same way and doesn't treat them just alike.

The chemical formulas of morphine and piperine are the same, both being $C_{17}H_{19}NO_8$, but the atoms are not arranged alike in each, and consequently nature does not react to them in the same way. In other words, there is a great difference between opium and pepper. Hence, when a dose of piperine is taken nature behaves in one way toward it, and in another way toward a dose of morphine. Why does she do this? As referred to above, the presence of a given drug in the organism causes a disturbance, because the atoms of its molecules are brought in contact with the atoms of the molecules of the cells of which our bodies are composed. The atoms of different drugs (morphine and piperine) are differently *polarized* and so to speak touch the organism unequally, and nature reacts differently.

Now, understanding this matter this way, why not synthetically alter the polarization of the atoms of the molecules of the morphine and piperine and constitute either piperine or morphine? Or, again, why not alter the polarity of the atoms of the molecules of morphine so that their facets might become so adapted to the atoms of the molecules of the cells of the organism that the morphine habit would not be produced?

Chemists take up a piece of opium and extract from it seventeen alkaloids. Why not take up morphine and "dehorn" it? Or so polish its facets that they would not so tremendously exhaust the powers of nature? Or, in other words, take out the objectionable features? This has been done with some of the components of opium.

Another thought: It is a well-known fact that some drugs have a primary and secondary effect, as castor oil, calomel, etc. At first they purge, then they constipate. Some drugs primarily produce stupor, secondarily insomnia. Why is this?

Looking at the matter every way it occurs to us that the primary result is brought about by the activity of the organism and the secondary result is a simple cessation of organic activity, or rest. Evidently there

is no such a thing as "blowing hot and blowing cold" with a drug. To blow or not to blow, that's the rub.

What has been said of opium and its derivatives can be said of any other drug. Camphor, indigo, madder, etc., are made synthetically, and we feel and believe that the day will come when the chemist will combine the atoms furnished to hand by nature and make them produce certain effects. When nature is not able to manage a drug, chemistry will modify it so it can be handled. Where the drug facets are too sharp they will be "polished down" by the substitution of others. When they are too flat they will be "elevated and sharpened," so that they may take hold of the atoms of the molecules of our organism.

These are just a few hints. Think on!

M. G. PRICE.

Mosheim, Tenn.

CALCIUM SULPHIDE IN SCARLET-FEVER

I was called to the country on January 18 to see a boy aged 14 who had been feeling poorly for two or three days but who had been urged and taught not to "give up" to the feeling of illness—who had, even on the evening of the previous day, helped with the chores on the farm. He had put in a very restless night and I found him with a temperature of 103.5° F., the scarlet rash already making its appearance.

I gave him the "clean-out" treatment and aconitine, together with echinacea and calcium sulphide, as this was a very virulent case, with severe throat symptoms and inflammation of the cervical glands.

This case had a slow recovery and at this date (February 15) the boy has not regained his usual strength.

It is of the other two children in this family that I wish particularly to speak—a boy and a girl, both younger than the patient referred to. At my first visit I left them a supply of calcium sulphide and they both cheerfully took it every two hours, while awake. They were not in any degree separated from the sick boy, but were in his room and helped to wait on the patient. The little girl had fever and sore throat on January 25. She was in bed only two days.

The rash was slight, but enough to make a decided diagnosis of scarlet-fever.

The other boy showed slight symptoms on January 30, and the father came to my office for his medicine, as he was "not ill enough to have a doctor." The child refused to go to bed at all, although he had a slight rash. I was called again to see the first patient on February 4. I found the second boy and the girl looking and feeling as well as ever, and the parents had difficulty in keeping them in the house.

The first child was still in bed, with no fever, but very weak; glands of neck still swollen; throat and nasal passages ulcerated; and a thick yellow discharge with a very disagreeable odor. His body was literally covered with large, heavy scales. An antiseptic and healing spray soon cleared up the nasal canals and throat. The magnesium-sulphate bath was ordered to help clear up the skin, and I left him on the iodide of arsenic. I saw his father today and he reports that the boy is able to sit up now most of the day and is slowly regaining appetite and putting on some flesh.

This was one of the most severe cases and the slowest to recover that I have ever treated. The other two cases were just the opposite, owing, I believe, to the use of calcium sulphide.

CHARLES S. STRAIN.

Rochester, Mich.

[In the first case, Dr. Strain saw the patient after the disease was fully developed, probably too late for any decided modification of its early stages. But we must wonder what would have been the result if this child had received the energetic and able treatment given the two other patients before it had "come down." There is certainly good reason to believe that it would have escaped the long siege of illness.—Ed.]

PARASITIC SKIN DISEASES

I have been on the point of submitting to you my treatment of the parasitic skin diseases for some time, especially of ring-worm of the scalp. I apply iodine-petrogen, 5 percent, to the infected area, then dissolve one mercury cyanide tablet in half a pint

of water and paint it on with a camelshair brush, until the surface over the iodine-petrogen area turns yellow.

Two applications a day for one week will eradicate most of the ringworms from the scalp without the necessity of claining the pus out. Barber's itch yields just as readily to this form of treatment. The resulting reaction is probably due to the formation of nascent mercury iodide.

G. W. POTTS.

Asbury Park, N. J.

[We confess our inability to locate "petrogen," though we assume that it is similar to vasogen, which is a compound of petrolatum, oil, ammonia, and iodine. Perhaps some of our readers can enlighten us.

On this assumption, there is no doubt that yellow mercury iodide forms from the contact with the mercury cyanide, the cyanogen which is released uniting with the ammonia. However, it is probable that the activity does not depend upon the "nascent" state, but rather upon the more intimate contact with the tissues, as well as with the parasites. Perhaps just as good results could be obtained by painting the skin with an iodine solution, and then with any solution of mercury, or *vice versa*.

The writer remembers a personal experience of many years ago, when he tried to dispel a boil with tincture of iodine, applied for several days continuously. Then, having heard of the virtues of "blue ointment," he put the latter on rather freely. But, whew! A most lovely inflammation developed, with the characteristic golden yellow discoloration of the mercuric iodide. The boil did very nicely!—Ed.]

THE CANADIAN MEDICAL ASSOCIATION JOURNAL

The Canadian Medical Association Journal made its appearance January, 1911. It is the result of a movement in the Canadian Medical Association toward the establishment of an organ of its own. The finance committee have appointed an editor and have acquired *The Montreal Medical Journal*, which is now merged into the new publication.

While we shall miss the visits of *The Montreal Medical Journal*, in which we have found many valuable facts and reports, we shall not find it difficult to transfer our good will and esteem to its successor, *The Canadian Medical Journal*. We congratulate our Canadian brothers on the establishment of their own journal, to which we offer our best wishes.

THE PROFOUND SLEEPER, AND HOW I MADE GOOD

"Air you the new doctor?"

This from a long-legged, sun-baked specimen that I instinctively knew came from the "scrub."

"Yes," I replied, "I am the new doctor."

Taking off his slouch hat and scratching his head in a contemplative way, he said: "Old man Bill Jones sent me in here to ax you ef you knowed anything to do for a fellow that has been sound asleep for five days and nights."

I said, "Oh, yes, I guess I can wake him up."

"Hold on, mister," he replied; "aint going to be no guessin' in this. Old Man Bill is powerful het up on this long sleep. He's done had all them old doctors out tha' and none of 'em could raise a har. Old Man Bill says ef you knowed how fur to do to wake the boy, then for you to come right out'n tha' and do it."

I saw at once it was up to me to make good or move. I also was very anxious to put one over on the old doctors. So into my bag I threw about everything I owned at that time and away we went to old Bill Jones's place, some twelve miles away. *En route* I asked many questions about the case, but received no satisfactory answers. There was always the same reply: "He is asleep and nobody can wake him."

I started out with a fine disregard for everything, thinking only of this chance to make good. The nearer I got to old Bill's, the more I thought of this queer business. I had no earthly idea as to what I could do or how. Then I had heard of old Bill and his temper. Well, I was into it and had to see it through! But I kept thinking of what I should do.

Arriving in sight of the place I was appalled. The scene was one not to be lightly thought of. Wagons, carts, saddle-horses, dogs galore. What with the neighing of horses, braying of mules, barking of dogs, the general holiday-look of things, I was forcibly reminded of a country picnic. Then, in the spacious front yard were men, women and children—all of the relatives and friends for miles around. As is customary in the country, this crowd of some two score met us in silence.

When I was just about half way from the gate to the house there came out of the door a tall, stooped-shouldered, gray-haired and bewhiskered fellow. He looked the commanding figure I had heard was Old Bill Jones. He came up close, looked me over with his keen old eyes, saluted me with "how-d'ye-do." Then everybody in turn came up to greet the new doctor. They had appraised me in their own way. Right there I would have given 'most anything I had to have known what their verdict was. You see this was my first call into this neighborhood and all depended on their first impressions.

By this time things began to look rather serious. Suppose I failed, after Old Bill's message to come "if I could do something."

Old Bill turned and walked toward the house, I following close behind him. He entered the door with me a close second. In a bare room, with wooden shutters tightly closed, the close, stifling air and darkness gave anything but a cheerful impression. After he finally opened doors and windows I found the interesting sleeper lying on a pallet, apparently in a peaceful sleep. He was a fine-looking specimen of young manhood. Sitting on the floor by the patient's head was a very comely young woman whom I rightly thought was the boy's wife. She looked up at my approach with the most pathetic and wistful look I have ever seen on a human face.

I took about ten minutes in looking the patient over. I could find no evidence of organic lesion. I attempted to raise his eyelid, but it was a job. His jaws were firmly set. He seemed well nourished. Out of the crowd of old women I singled out one. I questioned her up one way and

down the other to find out all I could about the case, including what the old doctors did and said about it. In fact, I was 'way out at sea and was killing all the time I could, hoping something would turn up before Old Bill called my hand. All this time the old man was standing close by, saying not a word, but his eyes right on me. I had made up my mind I had some kind of a case of hysteria to deal with. But how to prove it?

I knew, of course, that the old doctors had done every *ordinary* or *usual* thing to awaken the boy. So reasoned, it was up to me to do the *unusual* thing. Trusting to luck I staked all on one throw. Turning to Old Bill I asked for some lard. He got it for me. Then ordering the women out I lubricated my rectal speculum and remarked, before introducing it, "Mr. Jones, I will have him wider awake in five minutes than you ever saw him in your life." When I was attempting to introduce the instrument the patient rolled over, drew up his legs and kicked me and the speculum clear to the wall. This put me wise. Calling for four of the strongest men to hold the patient I went at him again. Now begun the most magnificent struggle I have ever witnessed. That boy handled those four big men like babies. It finally took eight to hold him till I could introduce the instrument.

Well, maybe I didn't wake him! I had him going over that floor kicking and cussing—nor was that all he did, either! Anyhow. I kept at him till he swore he would not go to sleep again in a thousand years, and as I packed my instrument-case, everybody in the shack was happy.

On my way home, however, I could not help wondering what would have happened if I had not thought of that rectal speculum.

Florida,

S. L. E.

THE PENALTY OF FAME

I have been conducting a small private hospital for six years. Naturally, as I am working hard to build up a reputation, my fame is increasing, and I submit the copy of a letter from the cantaloupe town in Colorado, to show you the price of this valuable possession. I am queered on diagnosis,

and would like to have help from anyone who can give it. Incidentally, I will state that the writer enclosed ten bright new stamps of the 2-cent denomination and one green worth 1 cent. This is the letter, *verbatim et literatim*:

"DEAR SIR: For a week I have ben worse took cold it made my nerves worse the nerves of my bowels are in such a confesion so much gas and pain and run off to much. Gas in the somach and the fix my bowels are in and somach that causes a hot forehed and a dull pain in the back of my head. Please send some medsin to cure me. Find stamps enclose. To pay. Please send by return mail. —Mrs. —."

What shall I do?

B. W. SAFFOLD.

Alva, Okla.

PREGNANCY IN OLD AGE

In addition to those instances mentioned under the above heading, on page 330 of *CLINICAL MEDICINE*, March, 1910, we find that, according to Kisch ("*Geschlechtsleiden des Weibes*," Berlin und Wien, 1904, 1192), Renandin relates the case of a woman sixty-one years old, who was delivered of a baby, having conceived after the menses had ceased twelve years. Deshayes mentions the case of a woman fifty years old who conceived two years after the menopause. Capron reported the case of a woman sixty-five years old who bore a child, although her climacteric had been established at the normal age period.

COLD AND RHEUMATISM OF THE EYE

Usually an injury of the eye by cold is assumed only in so far as this makes the eye less resistant against the attacks of microbes, but a directly unfavorable action of cold on the eyes is denied. Bonsignorio (*Rev. Gen. d' Ophth.*, 1909, p. 296; abstr. in *Wien. Med. Woch.*, 1910) says that this is wrong. The numerous capillaries of the eye predispose it for a vasoconstriction, and the delicate membranes react intensely against any noticeable fall in temperature. The author asserts that, under the influence of cold, diseases in the eye develop rapidly. These should, however, not be called rheumatism. The latter depends, in his opinion, upon an acquired or congenital dystrophia, a vital

weakness of a particular tissue, which reacts especially to the influence of cold.

If under the repeated influence of the latter the same disease-phenomena always recur, then that which is called diathesis is present, according to Bonsignorio. As to the rheumatism of the eye, it may occur with or without other rheumatic affections in the body. It occurs most often during the cold season. The author includes among rheumatic eye affections rheumatic glaucoma, and diseases of the iris, choroid and pupil. One attack predisposes to the occurrence of relapses.

TWENTY-TWO YEARS' EXPERIENCE WITH Pilocarpine in Ty- phoid Fever

I was graduated in the spring of 1886 and commenced practice at once in Lansing, Mich. My first case of typhoid fever was in March, 1888. The city had opened a big trunk sewer just above the dam in the river. In March the ice broke up in the river. At this time an epidemic of typhoid fever started in the first house near the river, above the dam, and extended all through the north part of city and out to the country along the course of the river. Their was a high mortality, and in instances the attacks were complicated by pneumonia.

In the beginning of the epidemic I lost three cases, one of typhoid and two of typhoid pneumonia. About this time I began having fever myself. My home was one and one-half blocks below the dam and my office was on the opposite side of river. I passed over the river many times each day and night. My bowels were very loose, I had nosebleed several times, and all the other symptoms of beginning typhoid; on the fourth day my temperature was 105° F. at 3 p. m.

I had read that large doses of quinine would reduce the fever, so took 40 grains of the drug at one dose. That evening my temperature was 105.5° F., and the quinine made my head feel very bad. The next day, at 5 p. m., my temperature was 106° F., and I began to realize that there were times when I did not know what I was doing. My wife was away on a visit, so I called up

my brother by telephone and asked him to come and take care of me that night, as I was very sick. I then closed my office, and called at a drugstore and got one ounce of the fluid extract of jaborandi. Then I went home. I do not remember much about what happened during the night. My brother said I told him when he came that I wanted him to give me a sweat and he did so, putting my feet in hot water and giving me hot drinks. I remember feeling better after I began sweating and went to sleep soon after.

About 5 a. m. I awoke and was still sweating. The sheets were so wet you could wring them. I seemed to be feeling good. I called for my thermometer and on looking at it I found that my temperature had been 106.5° F. sometime in the evening when I had taken it last. I then took my temperature and found it to be 97.6 °F. I told my brother to get the room hot and a tub of hot water. When all was ready I took a hot bath and had him rub me dry. When dressing, I saw that the ounce bottle of jaborandi was empty and asked what he had done with it. He said: "You asked for it when I was giving you a sweat and drank it all. I supposed you knew what you were doing."

My bowels moved very freely that morning. I took my temperature several times a day for three or four days, but it never went above normal. I dressed very warm and did what no one ought to do—went out to see patients. I had several cases of typhoid fever on hand and at once began giving them good doses of jaborandi, a teaspoonful every half hour until they were sweating very hard. Two or three teaspoonfuls was about all that was ever needed. All the cases I had on hand recovered, and in several I saw the first day or two after they commenced having fever I broke the disease up in from two to four days.

I began at this time treating all cases of fever the first one to three days with good doses of jaborandi, followed by a dose of castor oil. In almost all cases at the end of the second or third day, if the fever wasn't broken, it was running a very mild course. After that, unless the fever ran up to 103° F.,

I never gave any jaborandi, but if it did, I gave another dose.

For the next eight years I used jaborandi in all cases of fever of any kind and didn't have a death. Then I commenced using pilocarpine nitrate instead of jaborandi. Since that time I have used pilocarpine nitrate in all cases of fever of any kind, scarlet, malarial or typhoid, with the result that since I commenced the treatment twenty-two years ago I have never had a death from any kind of infectious or contagious fever.

In the fall of 1903 we had an epidemic of typhoid fever and I treated in all 27 cases. I will give my experience with one family; October 1 I was called to see Mr. and Mrs. R. and found them both sick with typhoid fever. Five days later Mrs. R's people had them both removed to their home. Mr. S's family consisted of father, mother, and seven children at home. Mr. R's fever ran fourteen days and Mrs. R's twenty-one days.

October 22 I was called to see John, the oldest boy, and found him with a temperature of 104° F. and all the other symptoms of typhoid. I gave him at once 1-8 grain pilocarpine, and then 1-16 grain every half hour until two more doses were given, 6 grains of quinine to be given one hour after giving the last dose of pilocarpine. I also gave 1-40 grain strychnine sulphate every three hours. After sweating began to stop I ordered a tablespoonful of castor oil, also capsules containing 4 grains of acetanilid compound and 4 grains of ammonium chloride, one to be given every two hours. October 23 I found the temperature 101° F., and ordered treatment repeated. October 25 the temperature was normal. I ordered the capsules to be given, and also strychnine sulphate, with the castor oil if needed. He made a rapid recovery and had no more fever.

October 31 I was called again and found Clara, age 22, and Bertha, age 20, both sick. Clara said she had had fever four or five days. Her temperature was 104.1° F. Bertha claimed that she had had fever only one day. Temperature 102.5° F. I ordered for both the same treatment that I had given their brother John. November 1 Clara's

temperature was 102° F. and Bertha's 99.5° F. Again I ordered the same treatment. November 2 Bertha's temperature was normal and Clara's 100° F. Gave Bertha for the next two days the capsules and strychnine sulphate and she got up feeling good. For Clara I ordered another dose, and on Nov. 3 found her temperature still 100° F. Then commenced regular treatment. Her fever never went above 101.5° F., and on the twenty-first day her temperature was normal.

November 2, when calling to see the girls, the mother said, "We have two more sick today." I found George, age 18, with a temperature of 103° F., and Conrad, age 16, with a temperature of 102° F. I gave them the same treatment that I did John and on the third day Conrad's temperature was normal.

November 6 I found Charles, aged 8, with a temperature of 102° F. In three days his temperature was normal. November 18 I found Bertha, aged 20, with fever again. Temperature, 103.6° F. She said she had had fever five days but wanted to go to a party and didn't tell until after the party. Failed to break fever this time. It ran a very mild course, never going above 102° F. after pilocarpine treatment, but ran twenty-one days.

I found the cause of all the trouble to have been one of the women taking care of Mr. and Mrs. R. She was afraid to carry the slop out to the proper place one night and emptied it on the grass by the back door. I was at a loss to know where the contagion came from, as everything seemed to be kept very clean. Later the woman confessed to me what the cause of all the trouble was. There were a good many deaths in the city during this epidemic. Why did not some of mine die?

I could give the history of a great many cases, but it would take up too much space. In the twenty-two years I have been using this treatment I have found that if I could see a case of typhoid fever during the first two or three days I could abort it with two or three days' treatment. But if it was left longer, the mouths of the glands in the bowels would be smaller, so that presumably they could not be emptied of the germs and

poison in them. But it always makes the disease run a more mild course, as the pilocarpine cleans out some of the glands and stops inflammation in them. At any time during the disease, if the temperature goes above 103° F., I give the pilocarpine treatment to reduce the temperature. I never have had any bad results from the use of pilocarpine, and have given it to patients 80 years old, and to babies, in proper doses.

In cases of grip I find the pilocarpine treatment works like magic. As soon as the patient begins to sweat, he will tell you that the pains are all gone.

If you can see a case of pneumonia when a patient is having a chill, or soon after, you can abort it by giving large doses of pilocarpine. If the case is far enough along you may have the characteristic pneumonia sputum, the next day, but very little fever, if any.

G. L. GARNER.

Lansing, Mich.

[We do not believe in one remedy for many diseases, but we do believe in one remedy for one pathologic condition as manifested during the course of many diseases. The existence of an acute infectious fever is an evidence of the inability of the phagocytic garrison to defend the body against the onslaught of the invading army of microbes, and one therapeutic indication is to reinforce the defenders. Pilocarpine vastly increases leukocytosis, and its use is as direct as scientific as, and a heap better established by results than, that of many of the serums and vaccines. Dr. Garner has the strongest backing for the claims he makes as based on clinical observations.—Ed.]

"AN EYE EXPERIENCE"

"To everything there is a season and a time to every purpose under heaven."

I confess to a strong impulse to quote the above verse from Kolieleth in the original Hebrew, as also the following seven verses, for, to me there is more deep meaning in one word of Hebrew than in a paragraph of English, or in any other modern language. But I should only lay a burden on dear old

Father Epstein; and you have no Hebrew type in fonts. So anyone who cares to, may find a sort of translation in Ecclesiastes III, 1—8. But I am becoming more and more convinced that, if many valuable secrets of the healing art are to be found, we must come into close *rapport* with the Oriental practitioners, much of whose knowledge has somehow come into the possession of the Hebrews. If the "family," however, is disposed to put me down as a Jew, they mistake, for I am an Essex County Yankee for eight generations back on my father's side, and five generations back on my mother's. But this is only by way of parenthesis.*

And the thought comes to me, if "there is a *time* for everything under heaven," is there not a *use* for everything. Is it a far-fetched assumption that every plant that dots the face of earth has some mystic connection with or influence over some function of the body that especially fits it for a remedy for disorders of that function? I don't purpose to attempt to explain what—in my opinion—that occult relation may be; whether chemical, electric, psychic, astrological (I beg your pardon, Dr. Abbott, that was a slip of the pen), or whatever it may be, I will not even suggest, as you readers, I believe, want "straight medicine."

Some of us however will get over the fence, and it was this habit of mine that led me to try a certain plant in the treatment of four cases of incipient poliomyelitis, with perfect success, and I have furnished it in other instances as a prophylactic. I am not as yet ready to say what this remedy is, for I wish to test it still further, as leading to a curative result for some of the sequelæ of this mysterious malady. I only remark that I asked for it in scores of drugstores, and not one of them had ever heard of it, although it is mentioned in the U. S. Dispensatory, and the homeopaths have it on their list, and one homeopathic pharmacy has it in stock. Only one of the manufacturing chemists, whose catalog I have, lists it. And the other remedy for the sequelæ seems to be known by only one house.

And all this is an aside. I started to tell of an eye experience. One of the plants most

*In this connection, isn't there a meaning in the Master's assertion to the woman of Samaria, "Salvation is from the Jews,"? (Translated from the Hebrew.)

neglected by the regular profession, although homeopaths use it in acute coryza, in which it is unexcelled, is *euphrasia officinalis*, known as "eyebright." As a remedy for the inflamed eyes in measles, in infants' sore eyes, when not syphilitic, and in that consummate nuisance, "pink-eye," it is perfection.

Of this plant Culpeper (A. D. 1653) writes: "If the herb was but half as much used as it is neglected, it would half spoil the spectacle-maker's trade. The juice or distilled water of eyebright dropped into the eyes for divers days together helps all infirmities of the eyes that cause dimness of sight. My experience is that its greatest use is in inflammations of the eyes that do not affect the optic nerve."

The synergist that helps it in this work I will notice later on.

On the fourth of July last I was down the harbor in a small motor boat. There was a strong wind that sent the spray over us in showers. At the turn of the tide on the ebb we were off Moon Island, where the combined sewage of Boston and the suburban towns is pumped up into immense reservoirs, and at ebb-tide is let out, with the expectation that it will be carried out to sea. Doubtless some of it is, but if you want to see a system of harbor pollution that is infallible, come to Boston and examine our "scientific" disposal of the excrement of over a million men, women and children, to say nothing of countless hospitals.

Well, a solid wave came over the port quarter, laden with this delectable compound, and deposited a batch over my left eye. There was no way of washing it out except with the contaminated water we were sailing on, so I had to wait for land.

That night I was taken with a burning sensation in my eye, and going to my chest for the *euphrasia* I found the bottle empty. The next day I got it filled at Clapp's (and by the way, don't look for results with the dirty fluid extracts of the shops—get the mother tincture from some good homeopathic pharmacy, or Lloyd's), and I went to work in earnest; but I had got a dose. For nearly two weeks I spent the days in a dark room, coming out, with the owls, after dark.

The inflammation finally subsided, but the sight of the left eye was well-nigh gone.

I could distinguish between a cat and a cow, but not much more, and any attempt to read or write was of short duration. The *euphrasia* had cleared out the inflammation and pain, but my sight was failing faster than this old man of seventy-three cares to see it go. For as yet I use spectacles only for reading or writing, not needing them as yet for street use.

I had to hunt up something to help out, and I dug out my disreputable scrapbook. There I found *verbena hastata*, or "vervain." This herb is said by old mystics to confer on one the power of "seeing through things." Again I opened Culpeper. After a long list of virtues which he attributes to this herb, he says, "the distilled water of the herb when it is in full strength, dropped into the eyes, cleanses them from films, clouds or mists that darken the sight, and wonderfully strengthens the optic nerve."

Here, then, was the needed synergist. I got the vervain at Clapp's and mixed it with *euphrasia*, equal parts, adding to the mixture an equal quantity of water. The improvement was marked the next day, and at this writing my sight is really getting better than before my accident.

I suppose some might ask, Why go back to the past for remedies? Because I believe them—some of them, at any rate—far superior to anything of the present day. I doubt if there is the equal today, in our armamentum, of Lloyd's "glyconda," which is a scientific evolution from Beach's neutralizing powder for infantile bowel disturbances. I generally prepare it with Abbott's calomel with aromatics, for I am a pretty solid alkaloidist, spite of my admiration for men like John Uri Lloyd. Even his massive personality does not obliterate the "family" of Ravenswood. I don't let the bigness of any man eclipse the largeness of another. Orion is a beautiful constellation, but I can turn my telescope on Scorpio or Sogittarius with equal delight.

The fact that remedies were employed years ago and have been forgotten does not detract from their value. "The Lord created medicines out of the earth" ages ago, and a study of Chapter 38 of the Apocryphal book, Ecclesiasticus, will teach us something.

This chapter, or the first twenty-three verses, was read at the funeral of a respected physician by the officiant some two years ago. He did not say from what he was reading, only that it was a very ancient book, and the large attendance of doctors were puzzled, and many of them went scurrying around to find out what it was. My friend, Dr. W., was calling on me one day, and told me of it, and expressed a strong desire to know what it was. I took down my Apocrypha, and showed him the chapter which to his delight he found was the very lesson he was after. It has a good word for Emmanuelism too, but nothing, that I can see, for Eddyism.

Well, I have given you a rambling letter, but you asked me for it, and as a warrant for "listening back" I give you a verse that Father Epstein will translate for you.

"And thine ears shall hear a word from behind thee saying: 'This (is) the way, go in it, for if you be of the right or if you be to the left.'" [Translated by Dr. Epstein.]

JAS. R. PHELPS.

Dorchester, Mass.

[Dr. Phelps' interesting story of his "eye experience" takes us back hundreds of years, reminding us of the strange old doctrine of "signatures," which during the middle ages made a profound impression upon medical practice, one that persists down to modern times. This doctrine, if I may state it crudely, was, that as man, the microcosm, is the image of God, the macrocosm, so he has his images in miniature in nature, and these images were put there for a purpose, to cater to his welfare, even as mankind exists for the glorification of God. And with this thought our ancestors were constantly looking for these strange resemblances, signs, "signatures," in the plants, and when they were found the resemblance suggested a purpose. For instance, blood-root was a blood remedy, because its juice was red, the color of blood; hepatica, or liver-wort, was useful in liver troubles, because of a fancied resemblance to the great depurating organ of the body. Hundreds of plants still carry these suggestive names, and doubtless still are used in medicine because of the unrecognized survival of the old "doc-

trine." One of the most interesting was the mandragora, the "mandrake," which had wonderful repute, because of a likeness to the genitals at the bifurcating root. We all know that ginseng, the favorite drug of the Chinese, enjoys its celebrity for a somewhat similar reason. The writer proposes to take up this subject and make it the title of a special paper, to be published before many months in CLINICAL MEDICINE.—E.D.]

TWELVE CASES OF VERSION OR TURNING

In an obstetric experience of fourteen years and taking in about 300 cases I have had occasion to practise version on account of transverse presentations twelve times. In ten of these cases I have done internal or podalic version by bringing down a foot. In two cases, where the waters had not drained off, I was able to turn the child by external version alone.

In my first case I was called to a woman who had been many hours in labor, the waters had long been drained off and the uterus was firmly contracted around the child, which had evidently been dead some time. I was obliged to call in another doctor to assist me and by our combined efforts we succeeded in turning and delivering the child. The mother made a good recovery after having a sharp attack of peritonitis, probably caused by traumatism.

The next case was almost identically similar, but I did not call an assistant this time. I worked from 1 p. m. till 6 p. m.—worked until I had not a dry thread on my body, but I turned that child myself and delivered it without injury to the mother. The child was dead, of course, but the mother made an excellent recovery and did not develop any complication of any kind. I am happy to say that I have never had another case as hard as this one.

In three instances I had to turn the latest-born child of a pair of twins. It has seemed to me that the youngsters tumbled out of their proper positions through having too much room in the womb after their mates were born.

I had always considered external version performed without assistance as next to im-

possible, but by experience in two cases I find that if the child is small and the bag of waters large it is entirely practicable. In cases where a midwife is confronted with a transverse presentation she is very likely to try to deliver by pulling on the arm, which is the reason Emperor William of Germany has to carry a paralyzed left arm through life.

WM. M. GREGORY.

Berea, O.

UTERINE HEMORRHAGE

I am interested always in what you say and do for the reason that you are a firm believer in the power there is in sane medication. About forty years ago I had a case of hydrocele that recurred again and again after washing out with injections of tincture of iodine; it set me thinking. So I determined to use tincture of iron safely diluted. It worked admirably and since then I have never had to repeat the treatment in a single case.

Recently I had a case of continuous hemorrhage of the womb; it had baffled treatment for about two months, curetting by one of our best surgeons included. I took a drams of tincture of iron, used a small long-nozzled H. R. syringe, small olive tip at end, bent the end into a gentle curve over a spirit lamp, pushed the nozzle up into the womb as far as I could without using force, having previously charged the syringe with the tincture, then slowly forced the iron into the cavity and withdrew the syringe. She had some pain, so I gave 1-4 grain morphine next day. She discharged some granular coagulated blood, the following day shreds of mucous membrane and a brown fluid still granular, and within a week she was up and doing her usual duties in her home. She is now menstruating regularly and has had no return of her old trouble.

We who solve abstruse problems in our profession either think for ourselves and the profession at large or we leave them groping in the dark. I have now used the tincture of iron in about twenty cases of the class above described and it has never failed in my hands. This treatment seems to be sure, safe and sane. A leading surgeon in

this city told this woman, whose case I have just described, that only removal of the organs would save her life.

S. E. McCULLY.

Dallas, Tex.

[The doctor is certainly right as to the immense value of iron in these hemorrhages. We are too prone to forget what good things we have in some of these old remedies.—Ed.]

LUETIC FETUS WANTED

The undersigned is very anxious to secure an undoubtedly luetic fetus, for use in connection with work on the Wassermann test. If any reader of CLINICAL MEDICINE can supply one he will place us under many obligations. Wrap the fetus in moist bichloride gauze, enclose in ten or more sheets of paper, pack snugly in a box and send by express. We shall of course pay charges, beside being glad to return the favor. Address,

DR. J. F. BIEHN,

Biological Laboratory

The Abbott Alkaloidal Company

Ravenswood, Chicago, Illinois.

SUPERNUMERARY FINGER, AND SMALL-POX THAT WASN'T

I have been a country practitioner of medicine for eighteen years, and for the most part have kept my experiences to myself, but there have been a few that may prove of interest to your circle of readers, even though coming from "back in the sticks."

On July 15 I attended Mrs. Y., age 33, in her second confinement. Nothing of special interest developed till after the delivery of a seven-pound girl, when I discovered that there was still another one. While awaiting the arrival of the twin I discovered a peculiarity in the hands of the first-born. On the outer aspect of each little finger there was a supernumerary digit attached to the finger just about the outer third of the first phalanx, by a very small pedicle, which seemed to contain only skin and a shred of connective tissue. The supernumerary digit on the left hand seemed to be a well-formed last phalanx, with bone

and nail complete, while on the right it was smaller and only showed a very poorly formed nail.

In twenty-five minutes the second child was born, also a girl, weighing six and one-half pounds. This one, too, possessed the same peculiarity of the fingers, only that both were large and well formed, the same as the one on the left hand of the first child.

I snipped off these appendages with scissors, which merely caused a slight cry, while the bleeding was very easily controlled. I had no trouble to gain the parent's consent to preserve them in alcohol. The placenta was large, single, with two cords and amniotic sacs, each requiring to be ruptured.

Now, of further interest are the facts that the mother has the marks where exactly similar appendages had been crudely removed by ligation, leaving the stumps of the pedicles, while her other child, a boy of nineteen months, was said also to have had such an adventitious organ on the little toe of one foot. The mother's case was credited to have been a "mark," there having been just one fine plum on a certain young tree which her mother was watching eagerly till it should be ripe, when a neighbor's small boy appropriated it to private purposes.

These are the facts as I have found them, and I offer no explanation. If anyone would care to see the specimens I shall take pleasure in exhibiting them to any who may call.

On March 17 I attended Mrs. B., a multipara, in confinement. The pains were rather inadequate, but labor progressed fairly to the completion of the first stage, when it seemed impossible to get further progress. The head was large, round, and unyielding as a croquet ball, so I applied the forceps and with considerable effort delivered a nine-pound boy who had a head as solid and bony as an ordinary two-year-old child. He was lusty and vigorous and has remained so. These, I suppose, are enough on this line, but I have one more rather peculiar experience to recite.

I had quite a number of cases which I pronounce varicella, or, to the people, chicken-pox. Before very long I began to hear of several cases of smallpox in the

practice of a neighboring physician. Naturally I thought that probably they were the real thing, until one day, without invitation either from the family or from me, he dropped in on one of my families where a young lady had an ordinary case of chicken-pox, insisted on quarantine restrictions and the vaccination of others of the family as well as of the near neighbors. He vaccinated sixteen persons within a quarter of a mile of where the sick girl lived, and one "took." This put me to thinking.

I announced that I was very sure there had been no smallpox in the immediate neighborhood, and that I seriously doubted the other reported cases. Later I accompanied the doctor to see one of his cases and found just what I expected, a young man pretty well covered with small blisters forming on very superficial hard bases that had arisen within the last few hours. The blisters were so delicate that a touch of the finger was sufficient to rupture them, and the contents were clear and watery. The whole eruption ran its course in from six to nine days. As a further test I vaccinated the young lady mentioned above, getting as fair a vesicle as I ever saw, which ran its course in perfect order, and she is just about "well" now. I have offered to vaccinate any or all the patients, but so far no others have accepted.

My excuse for reporting this is to show what one will meet now and then, and also I should be glad to hear what the editors and readers think of such "smallpox."

W. J. KING.

Cecil, Ark.

DIAGNOSTIC AND THERAPEUTIC HELPS

Use pilocarpine in scarlatina. It eliminates toxins and increases phagocytosis.

Nuclein is good in scarlatina. It increases the number and activity of the phagocytes.

In dysentery give emetine, 1 grain, in the evening while the patient lies quietly in the bed.

In acute alcoholism 1 grain of emetine is good. The patient must lie quietly in bed.

If you cannot find any other cause for dyspepsia, think of gallstone.

Abortion is most severe from the ninth to twentieth week, owing to the difficult separation of the placenta.

For rhus poisoning try an application of quinine in water, 1 teaspoonful in 3 ounces.

In sciatica apply tincture of iodine along the course of the nerve, and keep the bowels clean.

GUSTAF F. HEINEN.

Blossburg, Pa.

DIPLOCOCCUS IN THE KIDNEYS

I have recently found the second case of this kind. The first was that of a young lady in my home. She was taken with severe pain in the lumbar region, same fever, etc. A physician with whom I was intimate, being a near neighbor, was called in to see her. His diagnosis was lumbar rheumatism. I was not satisfied with the diagnosis and took some urine to the laboratory for examination and a large number of diplococci pneumoniae were found. A treatment with 20 tablets a day of creosote, with other remedies as indicated, among which was arbutin, cured the case in three or four days. A second attack, much lighter than the first, promptly yielded to the same treatment.

A little more than two months ago a man, whom we will call Mr. D., doing business in Chicago, was stricken with paralysis of the right side and left vocal cords and was taken to a hospital. Here an examination showed that he was what the physicians there, and the one here to whom the case was referred on his removal here, called the last stages of Bright's disease, and the paralysis was supposed to be uremic. In a couple of weeks he rallied so that he was brought here, where his wife and children were living. I was asked to make from one to two analyses of the urine per week.

After Mr. D. had been here a few days he had another shock or stroke, after which he was scarcely conscious, if at all, of anything around him and knew no one. The next day, Saturday, urine was brought me that looked more like milk than urine, being loaded with pus, albumin and sugar.

A slide of this showed large numbers of diplococcus. I told the man's brother-in-law, who was helping to care for him, that

if he desired I would let him have creosote and arbutin, and so these were given. On Tuesday another sample of urine was brought which was free from pus, almost free from albumin, with but little sugar, and elimination nearly standard. In a little more than a week the man had another stroke of paralysis from which he died. The day before his death the urine was almost normal, his mind cleared so that he knew anyone he had known before and he was able to sit up nearly all day. I might add that after the clearing of the urine after the second stroke triple arsenates with nuclein were added to the creosote and arbutin.

G. H. FRENCH.

Carbondale, Ill.

ITCHINESS OF SKIN IN SMALLPOX

About eight years ago an English physician, on the Chinese coast, treated a native patient suffering from cystitis plus an intolerable itchiness of the skin, when salol, 10 grains thrice daily, relieved both conditions. Soon afterward he had a smallpox patient whose chief distress was intense itching of the skin. He gave him salol in 10-grain doses, when, to his great surprise, not only was the skin irritation relieved but the attack of smallpox itself cut short.

To make sure of this fact, treatment in the next three cases of smallpox was limited to salol, 10 grains three times a day, the disease being cut short in every instance, papules not maturing as pustules and those further advanced drying up.

This remedy might be tried in any case of variola, to control symptoms, of course guarding against phenol poisoning.

Personally I believe every acute disease affecting mankind can be aborted if recognized early and the proper remedy is employed.

A. S. THOMPSON.

Richmond Hill, Ont., Can.

[Equally wonderful results in smallpox are obtained with calcium sulphide, if given to saturation. Sometime I hope we may be able to abort all the acute diseases; we are on the way, though the time is not yet. —ED.]



CLINICAL · MEDICINE POST-GRADUATE · SCHOOL *of* THERAPEUTICS

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PART III—LESSON NINETEEN

THE TREATMENT OF GOUT

GOUT: A PRELIMINARY DISCUSSION

This is one of the oldest known diseases. It was very completely and graphically described by Hippocrates, and since his day practically every medical journal at various times has contained articles advancing theories as to its etiology, pathology, and so forth. While we know that it is a metabolic disease, its exact cause is as yet unknown.

Character.—Gout is characterized by uratic deposits and inflammation of the joints. Most observers tend somewhat to the belief that it is due to uric acid being retained in the system, caused by renal insufficiency. There is usually a hereditary predisposition; at least this is true in 60 percent of the cases. It is transmitted by the father and usually to the younger and not the earlier children of the family.

Etiology.—Lack of exercise, overeating, a meat diet, alcoholism and lead poisoning are apparently causative factors. It is found more frequently in men, and 38 percent of the cases occur between thirty and forty years of age, 60 percent between thirty and fifty years of age. This disease is not very frequent in the United States; not nearly as frequent as in England and Germany and other countries where heavy ales and beers are consumed in large quantities.

The amount of uric acid in the blood is too slight to account for the sclerosis and other changes that occur in all organs. These are probably due to other agents. It may be that the purin bases, the precursors of uric acid, are responsible for more harm than uric acid itself. The probabilities are, however, that some entirely different product of metabolism than uric acid is responsible for the characteristic changes and symptoms observed in gout.

The gouty deposits consist of nearly pure biurate of sodium or of potassium. Later, as the disease becomes chronic, calcium salts are also deposited. In chronic gout, the excretion of uric acid on a definite diet is the same as in normal individuals. We know that for two or three days previous to the attack the uric-acid elimination is below normal, and this has led many to believe that uric acid was retained and deposited. During the acute attack, uric acid is increased in the blood but not nearly as much as in other diseases, such as leukemia. Therefore we can hardly consider it as the determining factor.

As before stated, the excretion of uric acid before the acute attack is below normal. It is greatly increased during the attack, and after the attack it again falls below normal. Some observers have claimed that the de-

creased excretion of uric acid in gout is due to the almost always concomitant chronic interstitial nephritis. This is the explanation for the frequent occurrence of gout in lead poisoning, being the result of a nephritis caused by the lead.

Symptoms in Acute Gout.—Prodromes are only irregularly recorded; they practically always are present, but are so vague as to usually escape the patient's notice. Among these we have particularly digestive disorders, cerebral congestion, vertigo, muscular pains, and in the majority of cases a highly colored urine.

The paroxysm of acute gout is characteristic. Usually the patient is awakened in the early hours of the morning with an acute agonizing pain in the metatarsophalangeal joint of the large toe. This is true of 95 percent of the cases. The pain is described as crushing, or like burning with a red-hot iron.

Upon inspection we find the skin over the locality tense, red, hot, very soon becoming edematous. It is highly sensitive to the touch. Later the pain abates, but the inflammation increases. This syndrome is repeated usually each morning for six or seven days, then the symptoms gradually subside. The severer the paroxysm, the shorter will be the attack. Occasionally the thumb, or the knee, or other joints may be affected, but as a rule it is the metatarsophalangeal joint of the great toe.

Convalescence occurs gradually and is usually complete in from ten to fourteen days.

Pathology.—There occurs primarily an inflammation. This is soon followed by necrosis and then a deposit of biurate of sodium and sodium phosphate. These are precipitated by the sodium bicarbonate in the blood.

It has been found by experiment that 0.004 Gram sodium biurate if injected into the joint will produce an inflammation. There is usually no deposit, however, following the experimental injection.

The temperature in acute gout averages from 100° to 101° F.—rarely 102° F. or above. The pulse is slow and hard, averaging 100. There is practically always a furred tongue. Anorexia, nausea and vomit-

ing are very common. The disease is more common during spring and fall or severe weather changes. The urine is very dark, decreased in volume, with increased specific gravity. The acidity is also very high. The uric-acid elimination is decreased or below normal preceding the attack, very much increased during the attack, and below normal immediately following the attack. This is also true of phosphoric acid, both being derived from the disintegration of nuclein. The uric acid is deposited in the joints as sodium biurate. The urea percentage and excretion is practically normal.

Albumin is nearly always present in small amounts. Oxaluria is a very frequent finding and often results in the formation of calculi. Sugar may be found intermittently—a so-called "gouty diabetes." Microscopically, we find hyaline and granular casts, blood and many renal cells, indicating an active hyperemia of the kidneys.

Blood tests show the red cells and hemoglobin but little affected during the acute attack, although in the chronic form of the disease we have a marked secondary anemia, showing a considerable decrease in the number of red cells and a slightly greater decrease in the amount of hemoglobin. The blood, however, will show us a marked leukocytosis, particularly of the neutrophilic type, so that we have a neutrophilia—an increase of the neutrophils over and above 60 percent of all of the leukocytes. In acute gout this is usually very high, the leukocytosis averaging 20,000 or more.

In chronic gout, we also have a marked leukocytosis with a neutrophilia. This serves as, and often is, the principal distinguishing point between chronic gout and rheumatism, in which latter there is not such a marked leukocytosis.

Uric acid can be demonstrated in the blood. To one or two drams of blood serum (or a smaller amount may be used) we add 10 drops of 30-percent acetic acid. Inside of twenty-four hours we have uric-acid crystals formed. They will crystallize on a thread if it be suspended in the mixture.

Chronic Gout.—This usually follows a number of acute attacks. There is less pain, less fever, less redness and less swelling, but

the deposits show a marked increase, and are permanent. They affect principally the feet and hands; occasionally the thumb, knee or elbow, sometimes also the spine; rarely the shoulder or hip. The deposits are principally in the cartilage, but occur also in the capsule and ligaments. Deformities result, such as ankylosis and contractures. Deposits occur in the ear in 25 percent of the cases, also in the tendons, skin, eyelids, nose, pharynx, penis, and scrotum.

In chronic gout we always have a concomitant chronic interstitial nephritis, in which we have a marked increase in the amount of urine of a low specific gravity and a very light color. The acidity also tends to be lower. Urea is markedly decreased. There is usually, but not always, a trace of albumin. Hyaline casts are constantly found.

Complications.—Renal complications, with albumin, occur in 26 percent of the cases. Chronic interstitial nephritis is practically always present in every chronic case of gout. Deposits of urates in the kidneys and in the pelvis usually occur. These result in hematuria, oxaluria, pyelitis and cystitis as complications. Arteriosclerosis is always present, indicated by headache and vertigo. Myocarditis, angina pectoris and atheroma of the valves are often present. Pulmonary stasis, bronchitis, and asthma are the usual pulmonary complications. Very frequently a retinitis is noticed. Neuritis, lumbago, sciatica and eczema usually follow as a result of the disturbed metabolism.

Prognosis.—The patients usually live for years. Death is due (unless to some intercurrent disease or complication) to uremia, apoplexy or pneumonia, in the order mentioned.

J. F. BIEHN.

Chicago, Ill.

THE TREATMENT OF GOUT

The proper treatment of gout will depend largely upon the kind and nature of the local manifestations, and the age, habits, temperament and antecedents of the patient. I can do no better than quote largely from a paper of mine on this subject recently sent for publication to *Merck's Archives*.

Two principal lines of treatment are to be instituted, one a general, or what might be termed prophylactic, treatment, directed to the gouty predisposition, and another, intended to relieve the acute attack, or gouty paroxysm.

The Gouty Paroxysm.—Attention will first be directed to the treatment of the gouty paroxysms, which should be conducted in the main on the same lines as those of infectious, toxemic or inflammatory ailments.

At the outset of the attack the bowels should be thoroughly evacuated by means of calomel and podophyllin, followed by a saline laxative, the idea being to remove the toxins present in the alimentary canal, and, so far as possible, to prevent their formation, thus minimizing the retrograde metamorphosis of the body nucleins.

Intestinal and Systemic Elimination must be promoted, not only through the bowels, but by the way of the kidneys and skin. After first thoroughly emptying the bowels, repeated purgation is undesirable, it being of more service to encourage the action of the skin and kidneys than to induce watery intestinal discharges.

If there is much fever, the patient should be confined to bed, and the inflamed joints kept at rest; but this injunction is hardly necessary, for in the majority of acute attacks of gout, the patient of his own initiative will seek the bed, placing his afflicted foot in the most comfortable position possible.

Local Treatment.—The painful joint can usually be somewhat relieved by gently rubbing it with some anodyne liniment, or applying some mentholated salve, and then swathing in cotton batting covered with oilsilk. This appliance acts as a light poultice and promotes local sweating and also a timely development of the tumefaction, which usually is followed by great relief. The application of cold to the inflamed joints must be strongly deprecated, as it tends to metastasis of the morbid process to the external organs.

The Febrile Stage.—During the febrile period, and particularly in sthenic cases, the volume of urine should be increased and the degree of urinary acidity lowered—even to the point of rendering the urine neutral or alkaline—by the free administration of

potassium bicarbonate or citrate or by some other alkaline mixture. However, sodium salts are objectionable for certain chemical reasons and should be avoided. No saline aperient containing any considerable amount of a sodium salt should be given.

A granular effervescent magnesium sulphate (which may well be combined with lithium carbonate and colchicine) is an ideal combination for gout and the so-called gouty and rheumatic diathesis. Another excellent combination is that of calcium carbonate, lithium carbonate and colchicine.

Laxative alkaline diuretics of this sort will not only promote diuresis, but will render the urine neutral or alkaline, will lessen the viscosity of the blood, and at least temporarily increase the excretion of purin nitrogen, all of which are very desirable effects to produce in the treatment of gout.

To Combat Inflammation.—For the purpose of controlling the gouty inflammation and shortening the attack, there is no combination of remedies comparable to colchicine, laxatives (preferably the laxative salines) and intestinal antiseptics.

Hutchinson places *alkaline saline* laxatives in the first place, of which he says:

"The old reliable remedies in gout, in which great group the alkaline laxatives are most important, have won their laurels and enormously relieve the situation by checking the acid processes of fermentation in the alimentary canal and sweeping the putrescent matters out of the system before they have time to give off their toxicant products to the blood. In short, almost every remedy which chemical experience has proved to be of value in gout and the gouty state will be found to prevent the fermentation or absorption of the intestinal toxins or to promote their elimination from the system."

The sodium salts, as referred to above, should not be used.

Colchicine as a Specific.—Colchicine seems to have a specific influence in gout, the striking effect of this remedy in reducing gouty inflammation and lessening the pain often being remarkable.

Some persons have a marked susceptibility to colchicine, experiencing a sense of faintness unless the dose be very small. In other

persons, ordinary doses induce purging, and here the dose must be reduced accordingly.

Apparently, small doses of colchicine increase the amount of urine, urea and uric acid excreted; while large medicinal doses cause vomiting and diarrhea, due to the excretion of the drug through the mucous-membrane lining back into the stomach and bowels.

As lithemia, with its multifarious manifestations, is invariably present in persons suffering from gout, colchicine is of peculiar value, and no agent is more generally useful in these conditions than the saline combination mentioned.

"The great objection to colchicine is its remarkable efficiency," says Dr. Waugh. "The melancholy, dulness, sluggishness, anorexia, bad breath, and 'tired feeling' are so promptly dissipated by a few granules of colchicine that the patient, perhaps unconsciously, increases his consumption of meat and relaxes his exercise, relying on the daily dose of colchicine to keep him comfortable. It would be far better to forego the aid of all drugs, and let nature punish the slothful glutton until he is driven back to hygienic living."

Objections to Colchicine Ungrounded.

—Fear has been expressed that, although the immediate action of colchicine be favorable, the more remote effects are not salutary and that the use of the drug tends to increase the frequency of the recurrence of the paroxysms. These apprehensions do not, however, appear to rest on any solid ground of facts.

One should know, of course, how to use colchicine. This alkaloid is much more rapidly absorbed than are the galenic preparations of colchicum; nevertheless, the slowness of its action renders this agent ill fitted for rapid, cumulative administration, so that the doses should be not less than two hours apart.

As a rule, the drug exhibits a more pronounced action on persons who eat much nitrogenous food. I rarely find it advisable to give more than 0.0005 Gram (gr. 1-134) four times a day, and even this may be too much for persons with delicate stomachs. In acute gout or in the cerebral congestions of plethoric persons, where a strong and

speedy effect is required, a much larger dose may be given, in some cases even as much as 0.001 Gram (gr. 1-67), given dissolved in hot water and repeated in two hours.

Dietary Rules.—During the inflammatory period no meat should be eaten; the use of meat unquestionably prologs the attack. Adequate nourishment of a less stimulating character can be supplied by means of milk, bread, farinaceous puddings, and a little fish. Alcoholic beverages, except under special circumstances, should be withheld during the febrile period. In weak or elderly persons whose systems have been permanently lowered by repeated attacks, the diet should not be unduly meager, and nourishing soups, white meat and a modicum of alcoholic stimulants should be allowed.

The Systemic Treatment.—The fundamental aim of a rational treatment of chronic gout must always be to diminish the incident of the diathesis on the constitution.

In the gouty diathesis there is a tendency to accumulation of water in the body fluids, as also to the precipitation in the tissues, as crystals, of sodium biurate.

The amount of urates in the bodily fluids can be diminished by lessening the amount of proteid substance ingested. It is well known that a vegetable diet is less productive of uric acid than an animal diet.

In choosing a diet for a gouty patient, however, regard must be had, of course, to the whole condition, and especially to the peculiarities of the individual. In the treatment of gout, as in the treatment of any other disease, it is necessary to consider the man as well as the ailment, and in gout, especially, it is often of more consequence to treat the man than the ailment. As a rule, gouty people should be advised to partake cautiously of meat, fowl, game, and cheese, and to eat as freely as their digestion will permit of bread, rice, garden vegetables, salads and fruits.

The advantage to be gained from an adjustment of the dietary on these lines may be inconsiderable or even inappreciable in cases of inveterate gout, but it may be of critical moment in slighter ones. A diminution of one or two grains a day in the amount of urate thrown into the circulation may make

all the difference between the occurrence or nonoccurrence of an arthritic attack.

Aliments to be Avoided.—Gouty persons should not use alcoholic stimulants. This rule will hold good in the great majority of cases. There are gouty patients, however, who seem to do better when allowed a moderate amount of alcoholic beverages.

Distilled spirits have but little influence in promoting gout, and whisky and gin less than brandy. On the other hand, the richer wines, beer, and strong ales are highly provocative of gouty manifestations.

Common salt should be partaken of sparingly, for, like other sodium salts, it promotes the precipitation in the tissues of sodium biurate. Potassium chloride may be substituted for the sodium chloride, resembling it in flavor, and being not only harmless but acting beneficially on the gouty system.

In this country, at any rate, all gouty persons suffer from uricacidemia, and for that reason alkalis, particularly the alkali carbonates, are necessary to overcome this condition. Other drugs sometimes found to be beneficial in chronic gout are the salicylates, potassium iodide, and piperazin.

Mineral Springs.—Gouty patients who can afford the time and expense should spend a few weeks each year at some mineral springs, the waters of which are free from sodium salts, a visit to a resort where the right kind of mineral water is available usually proving of much benefit. At a watering place a visitor has nothing else to do but to attend to his cure; his mind is diverted from himself and the worries of his daily life; he has all the advantages of proper hydrotherapeutic treatment, electric baths, massage, exercise, and, what is more, he will drink more water at such a place than he will at home.

Other Measures.—Gouty persons should lead an active, outdoor life, and should, so far as practicable, avoid heavy dinners and late hours. They should cultivate a habit of cheerfulness, and avoid as far as possible worrying and undue mental and bodily fatigue.

Chronic gouty joints may be relieved by massaging with some stimulating or anodyne liniment, painting with tincture of iodine or soaking the affected extremity in a hot

solution of potassium carbonate or lithium carbonate.

Persons of the gouty diathesis are liable to be troubled with affections of the skin, which in many cases seems to operate as a sort of safety-valve to the gouty system, so that, unless the itching and irritation actually becomes intolerable, it is not well to interfere too actively with this description of skin affections. Some simple antipruritic dusting powder or ointment applied to the affected cuticle will usually be all that is necessary.

GEORGE F. BUTLER.

Chicago, Ill.

GOUT

Causative Factors.—Sydenham, himself a sufferer from gout for many years, taught the world what it now knows concerning this painful malady: that it is hereditary as to the predisposition to it; that it is generated in the predisposed by a sedentary life with a too large supply of nitrogenous foods; the use of alcohol, especially sweet wines; the materies morbi being uric acid; and that colchicum is the most effective remedy for the paroxysms.

To these fundamentals have later been added the recognition of the uric-acid diathesis as the special predisposing condition; the probability that there is here an abnormal state of the cell nucleus, in view of the intimate relation between nucleic acid and uric acid; the relations with rheumatism, lead, influenza, and syphilis; and the extension and elaboration of the fundamentals laid down by the Master of Medicine of the seventeenth century. The recognition of the importance of the renal form is one of the most noted of these.

There is the less difficulty in diagnosing gout in that the victim generally expects it—knowing that he has inherited the tendency and being familiar with the symptoms as shown in his parents. The premonitory symptoms are those of the uric-acid diathesis.

Symptomatology.—The first attack usually commences suddenly, often during sleep, and in the metatarsophalangeal joint of the great toe. The attack is of an acute, non-suppurative inflammation resembling erysip-

elas. The sufferer generally appreciates Franklin's description—as if a drop of molten lead were dropped in between the bone and the periosteum. The sense of compression is marked. Tenderness is excessive until the swelling begins to subside, when there is pitting on pressure. Motion is impossible. The irritability of temper is notable. Fever is, as in rheumatism, more marked the earlier in life the attack occurs, and more in earlier attacks than in the subsequent ones. The acme may be passed in a few days or not for a week or even two. The larger joints may be affected as the case becomes chronic or inveterate. During the attack there is an increase in the production and sometimes in the excretion of uric acid. Each paroxysm is followed by the deposit of acid sodium urate in the form of tophi.

Determining Conditions.—The course varies with the life of the patient, but extreme old age may be attained with annual attacks of the malady in some instances.

Hippocrates observed that women were subject to gout after the cessation of menstruation; but the same habits of excess in alimentation will induce the malady as in men.

Sydenham said: "Moderation must be observed in meat and drink; so that the stomach will receive no more food than it can digest, and no fresh fuel be added to the disease. The other extreme is equally injurious. Abstinence weakens the parts by withholding their due proportion of that aliment which is necessary for supporting their strength and vigor."

Ebstein, whose work I have cited liberally here, says that a vegetarian diet with the necessary amount of vegetable albumen forms the most suitable plan of nutrition. Milk is good; eggs may be used in moderation; white meat is better than dark; alcohol in any form is poisonous to the gouty; abundance of pure or alkaline water is essential. Fruits containing vegetable acids are useful if they are so taken as to agree with the patient.

Management.—Thermal baths are good for those who can not take the needed exercise. The concomitants must be treated, such as syphilis and rheumatism.

Ebstein doubts the value of lithium, finding urotropin better, while piperazin is of use especially for the "rheumatic" pains. He adds: "The importance of treating the constipation is not to be underestimated." Sometimes the salicylates relieve pain. Gouty neuralgia demands iron and arsenic.

The specific remedy for gout is *colchicine*. This must be given in increasing doses until it sensibly acts on the stomach and bowels. It is one of the slowest of remedies to act, requiring from six to fourteen hours to manifest its influence. Hence it is not well adapted to the usual alkaloidal cumulative dosing, but should be administered in a single dose at bedtime. Begin with one milligram (1-67 grain) and increase this dose successively by an additional milligram each subsequent evening until nausea and diarrhea are manifested on the following morning. By this time the attack will evidently be under control.

Colchicine, therefore, is the remedy for the paroxysms, but it is effective in all forms of gout. Acting by stimulating the eliminants, it is one of the distinctly safe remedies, carrying itself and the *materies morbi* out of the body. The only harm it can do is that the patient may seek by its aid to dispense with the disagreeable necessity of taking exercise and of restraining his food supply to his actual needs—measures that are, ultimately, the only true or possible cure for the gout. It must be borne in mind that, given to excess, it increases vascular pressure by contracting the coronary arteries. The danger signals are active purgation, weak heart action and perhaps some cardiac irregularity.

Heat in all forms seems beneficial, and the modern methods of applying very high degrees of heat have their earnest advocates.

Sajous favors purgatives, especially mercurials, as enhancing the catabolic activity of the blood, arresting the accumulation of uric acid in the joints, and lessening the work imposed on the kidneys and their congestion. On the same principle he explains the beneficial action of colchicine. Sajous advises to lessen the intake of nucleins by avoiding the organs rich in these, such as the liver, thymus, kidney, and brain.

Beef extracts and the gelatinous extracts of tendons, bones, etc., are rich in nucleal-bumins that give rise to purins that irritate the kidneys.

Iodine, thyroid gland in small doses, and oxygen inhalations are useful as stimulating the adrenals.

Strychnine is of real value only in debilitated cases, with pallor, and this applies as well to iron.

The great difficulty in enforcing the vegetarian diet is the settled conviction of the patient that he is being starved. But if he will endure it for a week, with exercise exactly apportioned to his case, the sense of exhilaration following will often suffice to convert him. One of the best forms in which to take the necessary proteid is as clabber or buttermilk—the latter best of all when prepared with the Bulgarian ferment.

W. F. WAUGH.

Chicago, Ill.

COMMENTS ON THE LESSON

We quote briefly from a number of papers received during the last two or three months. We find many practical points in these papers, many of them evidently the result of personal experience in practice.

Rest Cure for Gastric Ulcer.—Dr. H. G. Palmer gives an outline of this method of treatment, as follows: "By the rest-cure treatment of gastric ulcer we mean absolute rest, both for the body and the stomach. The patient should be put to bed and kept there until the local tenderness is relieved and the general condition of the patient improved. Rectal feeding should be used exclusively until the ulcer is healed or nearly so, then a small amount of easily digested and nonirritating food may be administered by the mouth. Rectal feeding should consist of milk and eggs principally, and these seem to act the best of anything in my experience. Nothing should be given internally for a week, then the patient may take albumen water or milk, plain or peptonized. No boiled milk should ever be given; it always disagrees and often causes irritation. Other foods may be gradually added to the diet until a patient is again receiving the full amount required. An

olive-oil sponge bath should be given every day to aid nutrition."

Dr. Palmer has covered the ground well. It might be emphasized that a strictly recumbent position must be insisted upon, and that cold compresses over the abdomen are desirable, such as the Priessnitz bandage. According to Boas, feeding by the mouth may be resumed three days after the last occurrence of hemorrhage, though the physician may better deviate, if at all, on the side of safety. For a week, at least, the food should be exclusively liquid, and always at body temperature. A good meat juice, as bovine or Valentine's beef, may be employed, or albumen water or yolk of egg in emulsion. Milk, all things considered, is the best food.

Good Rectal Enemata.—Here are two suggested by Dr. W. C. Post, whose ideas are always practical: (1) 250 Gm. milk, 2 egg-yelks, teaspoonful of common salt, tablespoonful of wheat starch, and a tablespoonful of claret. This is practically the same as the formula suggested by Boas, who uses aleuronat (gluten) flour instead of the wheat starch. This mixture is of course warmed to body temperature and 5 to 10 drops of tincture opium added before injecting. Another nutrient enemata suggested by Dr. Post contains one ounce egg-albumen, 3 ounces decinormal solution and 2 ounces bovine.

Drugs Useful in Gastric Ulcer.—Dr. Post thinks there are not many. Ergot and its derivatives are strongly recommended during the hemorrhage. "To my mind the hypodermic use of morphine and atropine, especially the latter, is worth much more. The former for pain and pylorospasm is invaluable; the latter by encouraging peripheral vasodilation helps markedly to control bleeding. Ice is recommended over the epigastrium to check hemorrhage. Oil of turpentine and oil of erigeron have been recommended. Bismuth is also used, in large doses, practically as a local application to the ulcer. Silver nitrate and oxide are also recommended, but in my opinion rest of the body and stomach, followed by rectal feeding, then proper diet by mouth, morphine for pain, atropine to stop bleeding, later alkalis if needed for hyperacidity, hot

packs or fomentations over the stomach, regular catharsis by salines, arsenite of copper and hydrastine in proper dosage, and intestinal antiseptics, will offer a good selection."

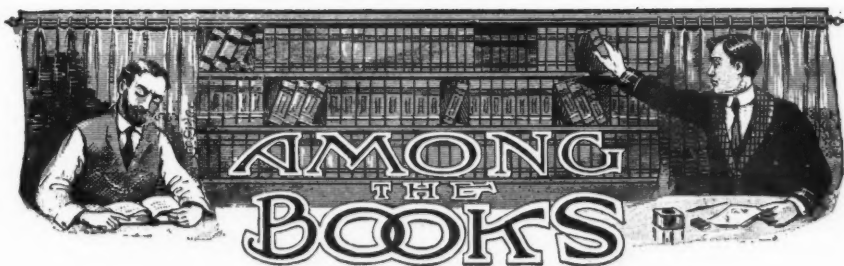
Dr. Post, as usual, has given an exceedingly practical résumé of the therapy of this disease.

It should not be forgotten that gastric ulcer is often a surgical disease, indeed, our surgical colleagues (some of them) incline to the belief that it is always to be treated by excision of the affected area of the stomach. This, however, is altogether too sweeping. Under judicious medical treatment, begun early, the majority of these cases will recover.

Do not forget that a gastric ulcer may be the nidus for carcinoma; despite the textbooks there are cases of gastric cancer in which hydrochloric acid is still secreted. The physician cannot be too careful in making a diagnosis, adding all the laboratory means to the usual physical tests, "to make assurance doubly sure."

EXAMINATION QUESTIONS

1. What are the most important etiological factors in the causation of gout?
2. Give a careful outline of the chemistry of the body during and after an attack of gout.
3. What is names by the term "uricacidemia," so commonly used? What causes this condition, and what is its relation to asthma, eczema, etc., according to recent clinicians?
4. What are the purin bodies, so called, and by what other names are they frequently known? What foods and drinks are rich in products of this class?
5. What are "retrocedent gout," and "irregular gout?" What is the character of the pulse of a "gouty" person—and why has it this character?
6. Outline a method of medicinal treatment for an acute attack of gout.
7. What diet would you prescribe for a person subject to attacks of gout?
8. Describe a case of gout or "goutiness" of the American type, as you understand it, and tell how you would manage such a case?
9. How would you treat a case of interstitial nephritis complicating a case of gout?



SOME POPULAR BOOKS FOR OUR INTELLIGENT PATIENTS

It frequently happens that we desire to give to our patients, or as the case may be, to their parents, a certain amount of information on questions of sanitation, hygiene, prophylaxis and nursing. Also it is a pleasing fact that the public is, today, far more interested in these matters than was the case formerly, and that people desire to know how to preserve their health and how to manage simple affections either in the absence of the physician or until he can be called. Finally, the physician himself may, especially if he is a busy country practitioner, be so absolutely worn out and weary that it is an impossibility for him to read and study, while he would be glad to read some medical literature if it were presented in a simple form.

For all these, and for other contingencies, the popular and semipopular books on medical topics which are being published more and more frequently may be of value, provided they are written by the right men and in the right way.

The Bookworm at this moment has before him a number of such books, which afford a wealth of information presented in a sufficiently simple manner to be intelligible to thinking patients, and yet written so interestingly that even we physicians may well profit from their reading and may use them to refresh our memories or to prepare our talks to patients, nurses, or before public gatherings.

The space at the writer's command is so limited that he cannot discuss all the books of this class which are sent him for review. The books mentioned below will, all of them,

well repay the doctor's reading and are worth being used by him for the information of his clients.

"Children's Diet in Home and School."
By Louise E. Hogan. Revised Edition.
New York: Doubleday, Page & Co. 1910.
Price 75 cents.

This is an excellent little manual for the use of parents, nurses and teachers, giving information on the proper diet for infants and children, from birth up to, and including, the school-age. The various classes of foods and their relative values are well described; the proper diets for summer, winter, in illness, for school luncheons, feeding for feeble as well as for average school-children, all find their meed of attention.

"Confidences. Talks with a Young Girl Concerning Herself." By Edith B. Lowry, M. D. Chicago: Forbes & Co. 1910.
Price 50 cents.

A simple and charming introduction into the mysteries of life, which should, as a matter of fact, not be mysteries, but should be considered as perfectly natural, as indeed they are. The author leads the girl from an understanding of the reproduction of flowers and birds to an understanding of her own body and its functions. The language is simple and charmingly frank; without any prudishness, but also without any suggestiveness.

Mothers would do well to study and meditate upon this little volume and to let their girl children read it under their guidance. While entirely elementary in its scope, it affords quite enough information to be rather preferable to the majority of the so-called "sex-books."

"Motherhood." A Manual for the Management of Pregnancy." Prepared espe-

cially for mothers, nurses and students of medicine. By Hudson D. Bishop, M. D. Cleveland: Rose Publishing Company, 1910. Price \$1.50 net.

This is a very complete guide for the management of pregnancy and labor, and their complications, and is, perhaps, written rather over the heads of most mothers.

The physiology and pathology of the states of gestation and parturition are excellently described, and if well and carefully studied, the directions are certain to make it possible to meet emergencies until the doctor shall arrive. The hygiene of the expectant and the actual mother, as also of the baby, has also received its proper attention. In short, the book is good. Nor is it in any way intended to replace the physician, but rather has the aim of making his work easier and of diminishing the possibility of danger to his patient.

The dietetic directions are excellent. The advise what to do in labor, until the doctor arrives, in emergencies such as hemorrhage, eclampsia, etc., are valuable not only for the attendants but for the doctor himself. All in all, we cordially recommend the little book to our readers, for the benefit of their nurses and of their patients.

"The Story of the Bacteria; and Their Relations to Health and Disease." *"Dust, and Its Dangers."* These are two books by Dr. T. Mitchell Prudden. Both books are in their second edition. Published at New York by G. P. Putnam's Sons. 1910. Price 75 cents each.

In these two little books the well-known bacteriologist Dr. Mitchell Prudden has told the story of the bacteria in a very attractive and popular manner, and The Bookworm has read them with great interest and enjoyment.

The study of the microscopic forms of plant life is comparatively so recent that there are many physicians living today who might well take up these little volumes as a preliminary to the more detailed and scientific study of more pretentious textbooks. To the layman, they afford a wealth of information on this highly important subject in not only readable form, but so interestingly and beautifully told that he may well be tempted to continue his investigations.

The mere mention of bacteria or micro-organisms has come to be understood by some people as something harmful and undesirable; the author shows that there are "friendly" as well as harmful bacteria and that the former are necessary to the normal process of life. The relative importance of the respective forms of bacterial life are explained, and the action of the pathologic germs is described in sufficient detail to be of value. The volume also contains prophylactic directions and advice, and is not only interesting but very useful.

The other book, that on dust, has been written with the purpose of informing people, in simple language, what the real danger is of acquiring serious disease—especially consumption—by means of dust-laden air, and how this danger may be avoided. It is, as the author says, an unpleasant subject, but one which everyone must know something about. The book fulfills its purpose clearly and well, and will prove of great value for ourselves as well as for our patients.

The reading of these books reminds The Bookworm of something he has wanted to talk about long ago, and which he will just mention here. If "doctors" are to be teachers, and if one of their duties is to prevent disease, and not only to cure it, then they should get next to the people when they are well and should tell them how to keep well. They should organize courses of lectures such as are being held, for instance, under the auspices of the Chicago Medical Society on Saturday evenings in the public library, and should give the people all the information which it is necessary for them to know. In such manner this important function of our profession can be well attended to. If any of our readers desire advice and information on the arrangement of such lecture courses and on the preparation of lectures, The Bookworm will be glad to help them.

"The Cause and Cure of Colds." By William S. Sadler, M. D. Chicago: A. C. McClurg & Co. 1910. Price \$1.00. This is another volume properly belonging in this series of popular books. We quote from the announcement:

"Although colds are so common, their origins, effects, and cure are clouded in

misapprehension. Dr. Sadler clearly distinguishes between the different kinds of colds, shows that in spite of their general name, low temperature is not the agency of their being, describes the courses of the various colds, distinguishes them from grip, and gives most comprehensive directions for their cure and for guarding one's self against them. This little book may be made of inestimable value by all who are willing to follow a physician's sensible advice."

BECK'S "BISMUTH PASTE IN SUPPURATIONS"

Bismuth Paste in Chronic Suppurations. Its Diagnostic Importance and Therapeutic Value. By Emil G. Beck, M. D. St. Louis: C. V. Mosby Company. Illustrated. 8vo. pp. 237. 1910. Price \$2.50.

Although the author's well-known method of treating chronic suppurative conditions with bismuth paste has not yet arrived at a stage of perfection when it might be called a finished method, the book before us describing the subject in its present stage of development will be welcome to many physicians and surgeons who do not have the leisure or facilities for following the periodical literature on the subject which is somewhat widely distributed in the different journals.

Dr. Beck has presented his method in his usual excellent manner, and his book affords a guide for the employment of bismuth paste that must go far, by assisting physicians and surgeons in its use, toward the further development and perfection of this diagnostic and remedial agent which promises so well.

LONGYEAR'S "NEPHROCOLOPTOSIS"

Nephrocoloptosis. By H. W. Longyear. St. Louis: C. V. Mosby Company. 1910. Price \$3.00.

A description of the nephrocolic ligament and its action in the causation of nephroptosis, with the technic of the operation of nephrocolopexy, in which the nephrocolic ligament is utilized to immobilize both kidney and bowel.

This monograph has the advantage of being entirely original and not a compilation

or a historic treatise, presenting, as it does, the author's view on the subject. Dr. Longyear believes that in the nephrocolic ligament he has discovered the principal positive etiologic factor for nephroptosis (floating kidney), and his discussion upon the treatment of this condition is based, naturally, upon this premises.

The book is well printed and illustrated. The text does not only consider the surgical treatment, but also the prophylactic and medical management of the conditions under discussion, so that, while of interest to the surgeon, it is even more so, if possible, to the physician.

SADLER'S "SCIENCE OF LIVING"

The Science of Living. By William T. Sadler, M. D. Publishers, A. G. McClurg & Co., Chicago. Pp. 420. Price \$1.50.

This book is addressed to the layman who values health and who prudently seeks to know how to maintain it; in other words, to the man who believes that prevention is better than a cure. It is the best of its kind we have seen. It sticks to known facts and, we are glad to note, it does not belittle the doctor and his work. Too many writers of late, actuated by sordid motives, have gone out of their way to point out the limitations of the healing art; the effect has been to destroy, in a measure, the influence of the doctor and to lower his standing in many communities.

We find between these covers a mass of information, well classified and indexed, on practically every phase of hygiene. Some subjects usually passed over by writers on health are discussed here. The work is quite free from scientific technicalities and medical terms, as a work of this kind should be. It is common for medical writers, when addressing their patients, to talk "over their heads," with the result that the message they aim to convey is only partly understood. In fact, it is the exceptional writer who can transpose his technical sentences into language comprehensible to the average person.

The author is a well-known practitioner in this city and a lecturer on hygiene. He occupies the chair of physiologic therapeutics in the Chicago Postgraduate College, and

his long and ample experience along this line makes him fit to give sane and accurate council on "the art of keeping well."

Enough of anatomy and physiology is given to make the instructions clear, and the illustrations help out in this and reveal to the reader some of the inwardness of his complex organism. More than a hundred pages are devoted to nutrition. We find "a study of foods" giving the composition, nutritive value, etc., of the common food-stuffs. The chapter treating on "poisoned and adulterated foods" is interesting and timely.

Self-medication is discouraged, while patent medicines are scored in these words: "Under no circumstance allow yourself to take a medicine of whose composition you know nothing. Do not take medicines unless they are prescribed by a competent physician. Have nothing to do with the nostrums of the almanac or the advertised remedies of newspapers and magazines. When in need of medical attention, employ a physician and not a druggist to prescribe for you."

The doctor who has occasion to recommend a book of this kind to an inquiring patient can safely recommend this one. In diffusing knowledge like this the doctor is knowingly curtailing the need for his services, and from a dollars-and-cents standpoint his income, but along this path lies his duty and his greatest usefulness to the world at large. In certain eastern countries it is said the doctor is paid for keeping his people well instead of administering to them when they are sick, and his success is measured by his ability to prevent sickness—perhaps we may work on the same basis in this country of ours in the very, very remote future.

HOMAN'S "AUTOMOBILE INSTRUCTOR"

Self-Propelled Vehicles. A practical treatise on the theory, construction, operation, care and management of all forms of automobiles. By James E. Homan, A. M. New York: Theo. Audel & Co. Seventh edition, revised. 1910. Price \$2.00.

A very useful book for automobile owners, telling, as its name implies, all about self-

propelled vehicles. As the reviewer does not himself understand anything about these mechanical carriages, he begs to be excused from writing a technical review; however, the fact that this book appears in its seventh edition (the fifth was published but one year ago) certainly testifies to its practical value. We wish it as well as our automobiling friends success—provided they "cut out" death-dealing joy-rides.

BOOKS ON PERSONAL HYGIENE

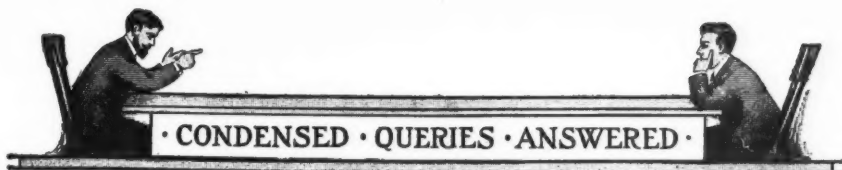
Personal Hygiene and Physical Development. A list of books in the Brooklyn Public Library. Brooklyn, N. Y. 1910.

We have received, through the courtesy of the Brooklyn Public Library, a little pamphlet of twenty-eight pages containing a list of books on the subjects indicated in the title. This list includes many valuable works and will prove of assistance to physicians in making selections of books for their own study as well as for that of their patients. The Brooklyn Public Library, we are informed, will, on application, be glad to send to any of our readers any one volume (at a time) of the books enumerated in the catalog.

IBERSHOFF'S "PHYSIOLOGY AND PATHOLOGY OF THE SEMICIRCULAR CANALS"

Physiology and Pathology of the Semicircular Canals. By Adolph E. Ibershoff, M. D., and a Foreword by Royal S. Copeland, A. M., M. D. New York: Paul B. Hoeber. 1910. Price \$1.00.

This is the first attempt to present in detail the subject treated in this volume to the English-speaking profession. The subject-matter is largely an excerpt of a translation of Dr. Robert Barany's "Physiologie und Pathologie des Bogenang Apparates (Funktionen Pruefung) beim Menschen," elaborated and amplified by notes and addenda gathered at the clinics and lectures of Drs. Rutin, Neumann and Alexander of Vienna. The book is of importance, not only for the eye and ear specialist, but also for the general practitioner.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5686.—“A Stubborn Case of Chorea.” E. E. G., Montana, has a victim of chorea for whom he is desirous to obtain relief and, if possible, a cure. The patient is a well-matured, rosy-cheeked girl of fifteen. She had the first indications of the trouble at the age of 4 years; was a very precocious child at that period, learning and repeating long poems, and doing other “stunts” of like nature. The manifestations at that time were controlled, and did not again appear until at the age of eleven, continuing intermittently after that, but have been continuous for the last eighteen months or longer. She began menstruating when eleven, and the flow has been regular ever since, although rather profuse. Our correspondent writes further:

“I saw the patient the first time two years ago, but only once. Did not see her since then until within the last week. Her mother informs me that a number of physicians have treated her, all giving the old stereotyped remedy—Fowler’s solution. Now she returns to me nearly in despair. I told her that if there was any cure she should have it. Hence, I am writing you for helpful suggestions. I want you to provide the medicine with strict directions for its use. I have used many of the active principles with success, but you know old-school men who entered practice in the ’80’s and earlier are hard to turn from their old theories. However, I am always open to conviction, and if we can cure this girl, you and yours shall have all the credit.”

In reply, we cannot do better than to refer to the treatment outlined in our March number, page 352, in answer to another

correspondent, G. M. S., Query No. 5685. As a matter of course, the girl’s urine should be examined and also the reflexes tested; furthermore, the rectum and genitals must be inspected with especial care. Percuss the spine for tender areas and let us know just what you find. The eyes should be tested for errors of refraction. Absolutely prohibit tea and coffee. Insist upon an epsom-salt sponge-bath (1 ounce to 2 quarts of water) every third night, followed by brisk friction with a rough towel. Limit this young lady’s diet, excluding sweets, pastry, and meats.

—
QUERY 5687.—“Worms. Fat Globules in the Feces.”—W. H. R., Ohio, forwarded to our pathologist a vial containing small-sized masses voided with the feces by an elderly lady who says that she “passes hundreds of them.” The doctor writes: “Several weeks ago she passed a worm five or six inches in length, flat, some parts one-fourth inch broad. With a magnifying glass I could trace the alimentary canal. The worm was not jointed. I gave her calomel and santolin, but without result. I then gave her an emulsion of oil of turpentine and olive oil, and she brought me these little things yesterday.”

The pathologist reports that the “small masses” submitted are merely particles of undigested fat. The roundworm, *ascaris lumbricoides*, would not be “flat.” *Oxyuris* could not possibly attain this size. *Tænia saginata*, the common “beef-worm,” is very distinctly jointed, as is also *tænia solium*, the pork-worm. *Tænia nana*, the dwarf tapeworm, is not so distinctly seg-

mented, but it is very small. It is barely possible that the worm passed was a fish-worm, *bothriocephalus latus*, the latter being fairly common.

Under the circumstances we suggest that you give a good preparation of male fern with chloroform and castor oil in the early morning, the patient having fasted since 5 o'clock of the previous evening. Carefully watch the stools, which should be voided into a pail of blood-warm water.

Is your patient at all anemic? As to the fatty stools, it would be well to give pancreatin, and for a time withhold fats. Make a careful physical examination, and advise us further. In this connection we might call attention to the importance of preserving any unusual parasite (in fact any parasite save those of the most common character) passed by patients.

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 QUERY 5688.—“*Borborogmus*.” R. W. C., District of Columbia, presents the following clinical data and asks us to suggest medication:

“R. K., male, aged 21, height 6 feet, weight 166 pounds. Has had the diseases of childhood, from which recovery was good. Has not been attended by physicians for ten years. Is clerk in a department store, while studying at nights. Appetite good; eats regularly, but fast. Bowels regular, two movements. Eats lunch at 12 o'clock, walks fast to school at 5 p. m., and at about 5:30 is troubled with colicky pain and audible noises in bowels, the latter heard several feet away. Eats supper at 7 p. m., and is troubled immediately. This condition is worse on examination at night, and under any mental strain. He is especially fond of bread, potatoes and sweets. The clean-out, clean-up and keep-clean course, also oil of turpentine, *asafetida*, *hyoscyamine*, *atropine*, and other remedies have been tried, but without any decided benefit.”

Loud grumbling and splashing noises (*borborogmus*) are often heard in the intestines of neurotic subjects. Patients with intestinal catarrh also present this symptom. We suggest that you have the abdominal area massaged two or three times a week. Instruct the young man to wear a snugly fitting abdominal belt and to abstain for a

time from starchy foods. The sweets and potatoes must be eliminated from his diet. Give *hydrastin* and *strychnine valerianate* half an hour before food; *papayotin*, charcoal and sodium bicarbonate after meals; nucleinated phosphates (lime, iron and manganese) midway between meals.

Of course, we are prescribing upon a very limited conception of local and general physical conditions, but bitter tonics and digestives are unquestionably indicated, and the atonic condition of the intestines must be overcome.

It might be well to have specimens of the patient's urine and feces examined. See whether the sphincter ani needs dilatation. Is there any evidence of gastropnoia?

—
 QUERY 5689.—“Quickly Acting Diuretics.” H. E. C., Wisconsin, inquires whether there is anything that will act rapidly and certainly when there is almost an entire stoppage of urine? As to this, diuretics are of various kinds. One extremely and most generally efficacious formula is as follows, for single doses: *Lithium benzoate*, *barosmin*, *arbutin*, *collinsonin*, 1-6 grain of each, and oil of juniper, 1-4 drop.

The condition giving rise to the suppression of urine, however, must always indicate the remedy; drugs which will cause profuse diuresis in one case may fail entirely in another. The physician must ascertain the underlying pathology, whether the disorder is of a renal, vesical or circulatory nature. Total suppression of the urine is a dangerous condition.

Frequently high enemata of decinormal salt solution and the application of hot wet compresses over the kidneys and bladder and the administration of such drugs as *digitalin*, *scillitin*, *barosmin* or *asparagin* exert a marked diuretic effect. *Pilocarpine* is another extraordinarily useful remedy. *Caffeine*, *cubebin*, the nitrates, *lithium salts*, *sparteine*, *strophanthin*, besides many of the essential oils are useful diuretics. Still, as pointed out, the absolutely essential thing is to give the right remedy for the condition present.

Suppose you get clearer ideas of the cause of suppression and in the meantime relieve renal congestion, if it exists, by giving small doses of *atropine* or *hyoscyamine* and then

push digitalin (or scillitin) with asparagin or barosmin, at the same time giving the patient barley water freely, adding one dram of a good preparation of hydrangea to each glass. Don't forget the efficacy of warm saline enemata. Also—under aseptic conditions—catheterize the patient. The bladder may be paralyzed from distension. Occasionally a calculus or polypus acting as a ball-valve occludes the vesical orifice. Diuretics there would merely increase the trouble.

—
 QUERY 5690.—“Hawley's Decoction of Carrots.” A. P., Rhode Island, wishes information regarding the nature of Hawley's decoction of *daucus busillus*, and where the same could be procured.

We are entirely unfamiliar with the preparation and do not find it listed. Although trying to familiarize ourselves with all modern remedial agents, we must plead guilty of total ignorance of this article.

The Standard Dispensatory lists an oil of *daucus carota* (carrot seed) and Merrill's “Digest of *Materia Medica*” mentions a tincture (alcoholic) of the seed of the wild variety of *daucus carota*.

Carrot-seed oil is soluble in alcohol, slightly in hot water. Preparations from carrot seed are supposed to be useful in suppression of urine and painful micturition and as an aromatic stimulant and carminative. The dose of the tincture is from 5 to 20 drops. An infusion of carrot seed would hardly be a “modern medicinal agent,” would it? You are of course familiar with the fact that carrot tea is supposed to have diuretic, diaphoretic and slightly emmenagog properties. Is it not probable that this Hawley preparation is a patent medicine? The “*busillus*” seems to point in that direction.

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 QUERY 5691.—“Fissure of Tongue.” G. C. H., North Dakota, wishes suggestions as to treatment of a woman aged forty-three, mother of three children, general health in every way good, except for slight digestive trouble at times in the form of fermentation and eructation of gas. She suffers intensely from a fissured tongue. Fissures are numerous, confined to the anterior third of the

dorsum, and radiate from one main large fissure in the median line about 3-16 inch in depth. Fissures began to appear six or eight months ago; have been indolent, and are quite sensitive to food and temperature irritation. The top of the tongue is lightly coated. Inflammatory symptoms absent. A 10-percent solution of silver nitrate, also the pure stick, has been applied to the central large fissure, twice, together with antiseptic mouth-washes. Where the silver was applied, the tongue is clean and has normal color, but otherwise there is no change. Syphilis is excluded.

It must be remembered that fissures of the tongue, when persistent, are usually of luetic origin; however, in some forms of a subacute glossitis the “central groove” which is met with in not a few individuals may become deepened, raw and infected; transverse cracks may also appear. A diagnosis cannot possibly be made from the data given. Send a scraping from the tongue and a 4-ounce specimen of urine from a twenty-four-hour output, stating the total quantity voided.

It is quite possible that the woman is autotoxemic—a result of gastric and intestinal indigestion. The tongue might under such circumstances become inflamed and bacteria would of course immediately invade the papillæ of the dorsum. The central groove would ulcerate first along the edges. Until we know more certainly what you have to deal with, keep the patient's mouth thoroughly clean by the use of a mentholated solution of the sulphocarbolates, and touch the fissures morning, noon and night with a swab soaked in pure hydrogen dioxide solution, then apply borated lanolin. If the condition is due to dyspepsia, that disorder must be corrected.

If a leukoma exists, these steps will prove beneficial and more definite procedures can be instituted later. Send with the scrapings a complete clinical picture. Echinacea and thuja may be applied every few hours with advantage.

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 QUERY 5692.—“Bromidrosis.” E. B. T., Georgia, asks advice as to treatment of a patient with “a very peculiar affection.” She is rather fleshy, and unless she bathes

at least twice daily, winter and summer, the body-odor is "terrible, just as if she had not bathed in a week." The doctor has tried several things without seeing results.

Nine times out of ten, patients so afflicted are autotoxemic. There is fermentation of the contents of the intestines with absorption of the toxic products and elimination of material through the skin, which should be excreted in other ways. Have a specimen of the girl's urine examined. Give her, on general principles, a sulphur-containing laxative, after each meal, and a saline laxative draught every morning, with some good hepatic stimulant every third night. Have her bathe the entire body with a carbolated epsom-salt solution (epsom salt, 1 ounce; carbolic acid, 20 minims; water 2 quarts). Then, to the arm pits, between the toes, and wherever there are creases, apply the following powder: Boric acid, 3 drams; tannin, 3 drams; talcum, 3 drams. Or you may use boric acid, 6 drams; salicylic acid, 1 dram; starch and talcum, of each 1 ounce. This may be scented with a little orris root or other perfume.

If this does not suffice and the odorous areas can be located, apply, after washing with the epsom-salt lotion, this solution: Creolin, 1 dram; extract of violets, 4 drams; alcohol, 3 ounces. The axilla may be sponged with this solution morning and night, the powder being used elsewhere and also dusted freely into the stockings. As a matter of fact, however, free elimination is the secret of the cure.

QUERY 5693.—"Chronic Arsenical Poisoning." P. M. P., Mexico, is in charge of a hospital where a large number of lead and arsenic poisoning cases are treated. They are not the acute forms usually described in textbooks, but chronic cases. The doctor desires us to outline an effective treatment.

With such a limited idea of the conditions presented in your arsenic poisoning cases we are unable to suggest effective medication. We gather that the patients are working in mines where the ore is arsenical. Chronic arsenic poisoning is a difficult thing to treat. As most of the authorities point out, it is impossible to formulate "set" methods, the peculiar symptoms present in the individual

governing medication. Excessive impregnation of the system with arsenic is first shown, as a rule, by irritation of the stomach as evidenced by anorexia, soreness and sensation of weight at the epigastrium and diarrhea. Nervous symptoms are also prominent, while various forms of paralysis are not uncommon.

Arsenous acid itself does not act upon the sound skin but upon the mucous membrane. Thorough elimination is essential in all cases. Also, it is desirable to form a stable salt of the drug, endeavoring to pass the poison from the system in this form. This is an important subject and should be more thoroughly understood. We invite physicians familiar with this form of arsenic poisoning to report their observations. Any method of treatment which has been found effective should be outlined in detail.

QUERY 5694.—"Ammonium Carbonate in Capillary Bronchitis." W. H. C., Tennessee, wonders why we make no extended mention of carbonate of ammonium. The doctor has had considerable experience and found that drug "a life saver in certain cases, particularly in capillary bronchitis."

Ammonium carbonate has been recommended by us from time to time, especially in capillary bronchitis where the child is, so to speak, suffocated in its own secretions. The positive therapist, instituting efficient treatment early, rarely encounters such a serious condition and should be familiar with this remedy.

We recognize in ammonium carbonate an excellent stimulant, one which will sustain the heart and respiration during the course of pneumonia and continued fevers. It is also a very valuable stimulant expectorant of special service in chronic bronchitis and bronchial pneumonia. We prefer to give ammonium carbonate dissolved in fluid extract of glycyrrhiza. It is a drug easily obtainable, but as it is not feasible to present it in tablet or granule form, it is not generally put out in that way. As already pointed out, we believe the dosimetrist has better remedies, or at least is in possession of drugs which, properly used, prevent the appearance of symptoms demanding the use of ammonium carbonate.